

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 26.04.95
Test oil : ISO 4113

Combination No. : 0 400 074 896

Injection pump
Pump designation : PES4M55C320RS110
EP type number : 0 410 054 956

Governor
Governor design. : RSF375/2200M21
Governor no. : 0 420 021 148

Cust. part No. :

Customer-spec. information

Customer : MB-NFZ
Motor : OM616 2.4L ADA
Power kW : 55.0

TEST BENCH REQUIREMENTS

Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0

Overflow valve : 1 417 413 012

Inlet press. bar : 1.0

Test nozzle holder
assembly : 1 688 901 111

Opening pressure
bar : 148.5
Tolerance bar : ± 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0

Firing order : 1- 3- 4- 2

Phasing : 0-90-180-270

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 12.65
Tolerance mm : ± 0.05

Del. quantity
cm³/1000 strokes : 37.5

Tolerance
cm³/1000 strokes : ± 0.5

Check tolerance
cm³/1000S. : ± 1.5

Speed
Tolerance
cm³/1000 strokes : 2.5

Check tolerance
cm³/1000S. : 3.0

Rated speed rpm : 375

Rack travel in mm : 6.20
Tolerance mm : ± 0.10

Del. quantity
cm³/1000 strokes : 7.5

Tolerance
cm³/1000 strokes : ± 0.5

Speed
Tolerance
cm³/1000 strokes : 1.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

IDLE STAGE

Rack travel in mm : 6.00
Tolerance mm : +- 0.10

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1000
Ref. pressure
ALDA / ADA hPa : 1100
Del. quantity
cm³/1000 strokes : 37.5
Tolerance
cm³/1000 strokes : +- 0.5
Check tolerance
cm³/1000S. : +- 1.5
Spreed
Tolerance
cm³/1000 strokes : 2.5
Check tolerance
cm³/1000S. : 3.0

RATED SPEED

control lever
position degree : 50.0

rack travel mm : 8.40
Rated speed rpm : 2350

rack travel mm : 0.50
Tolerance mm : +- 0.50
Rated speed rpm : 2950

SET IDLE CONTROL LEVER POSITION

Rated speed rpm : 1000
CRT mm max. : 1.45

LOW IDLE

control lever
position degree : 10.0
tolerance degree : +- 2.0

Setting point w/out bumper spring
Rated speed rpm : 375
rack travel mm : 6.20

SET IDLE AUXILIARY SPRING

Rated speed rpm : 450
rack travel mm : 5.20
Tolerance mm : +- 0.10

rack travel mm : 2.00
Rated speed rpm : 780
Tolerance 1/min : +- 50

Load pick-up

Rated speed rpm : 250
CRT mm min. : > 10.00

Rated speed rpm : 1000
CRT mm max. : 1.45

rack travel mm : 6.20
Rated speed rpm : 375

TORQUE CONTROL

Rated speed rpm : 1000
rack travel mm : 12.65
Tolerance mm : +- 0.05

Rated speed rpm : 1700
rack travel mm : 12.30
Tolerance mm : +- 0.10

Rated speed rpm : 2150
rack travel mm : 11.90
Tolerance mm : +- 0.10

ADJUSTMENT TEST ADA/ALDA

SETTING

Rated speed rpm : 1000
Ref. pressure
ALDA / ADA hPa : 950
rack travel mm : -0.10
Tolerance mm : +- 0.10

MEASUREMENT

Rated speed rpm : 1000
Ref. pressure
ALDA / ADA hPa : 900
rack travel mm : -0.60
Tolerance mm : +- 0.10

Rated speed rpm : 1000

Ref. pressure
ALDA / ADA hPa : 750
rack travel mm : -2.00
Tolerance mm : ± 0.20

FUEL DELIVERY CHARACTERISTICS

Ref. pressure
ALDA / ADA hPa : 1100
Rated speed rpm : 1700
Del. quantity
cm³/1000 strokes : 38.3
Tolerance
cm³/1000 strokes : ± 0.8
Check tolerance
cm³/1000S. : ± 1.8
Spreed
Tolerance
cm³/1000 strokes : 2.5
Check tolerance
cm³/1000S. : 3.0

Ref. pressure
ALDA / ADA hPa : 1100
Rated speed rpm : 2150
Spreed
Del. quantity
cm³/1000 strokes : 38.3
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 2.0
Spreed
Tolerance
cm³/1000 strokes : 2.5
Check tolerance
cm³/1000S. : 3.0

HIGH IDLE

Rated speed rpm : 2350
rack travel mm : 8.40
Tolerance mm : ± 0.20
Del. quantity
cm³/1000 strokes : 22.0
Tolerance
cm³/1000 strokes : ± 2.0
Check tolerance
cm³/1000S. : ± 3.0
Spreed
Tolerance
cm³/1000 strokes : 2.5
Check tolerance
cm³/1000S. : 3.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.10
Del. quantity
cm³/1000 strokes : 52.0
Spreed
Tolerance
cm³/1000 strokes : 6.0
Check tolerance
cm³/1000S. : 6.0

LOW IDLE

Del. quantity
cm³/1000 strokes : 8.3
Check tolerance
cm³/1000S. : ± 1.8
Spreed
Check tolerance
cm³/1000S. : 1.5

Grad : > 49.00

Grad : < 46.50

SETTING PNEUMATIC FAST IDLE (ELA)

control lever
position degree : 10.0
tolerance degree : ± 2.0

SETTING/TESTING ELECTRONIC IDLE
REGULATION (ELR)

control lever
position degree : 10.0
tolerance degree : ± 2.0

control lever
position degree : 50.0

ADJUSTMENT

control lever
position degree : 50.0

TESTING PNEUMATIC SHUTOFF DEVICE

Rated speed rpm : 375

End of test specification sheet



BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 31.05.90
Test oil : ISO 4113
Combination No. : 0 400 836 016
Injection pump
Pump designation : PES6A85D410/3RS2415
EP type number : 0 410 886 915
Governor
Governor design. : RQV750AB1004L
Governor no. : 0 420 212 093

Cust. part No. :

Customer-spec. information

Customer : KHD
Motor : BF6L913
Power KW : 42.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet temp. °C : 40
Tolerance °C : ± 2.0
Overflow valve : 1 417 413 000
Inlet press. bar : 1.5
Test nozzle holder assembly : 0 681 343 009
Opening pressure bar : 173.5
Tolerance bar : ± 1.5
Test lines : 1 680 750 014
Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0
Firing order : 1- 5- 3- 6- 2-
: 4
Phasing : 0-60-120-180-240
: -300
Tolerance : ± 0.50
Check tolerance °NW : ± 0.75

BASIC SETTING

Del. quantity
cm³/1000 strokes : 12.0
Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 5.0
Speed
Tolerance
cm³/1000 strokes : 2.5
Check tolerance
cm³/1000S. : 4.5

(B) SETTING OF INJECTION PUMP WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm : 752
guide sleeve
travel mm : 3.33
Tolerance mm : ± 0.25
Rated speed rpm : 530
guide sleeve
travel mm : -6.91

Tolerance mm : \pm 0.25
 Rated speed rpm : 880
 guide sleeve
 travel mm : 17.51
 Tolerance mm : \pm 0.25
 Rated speed rpm : 825
 guide sleeve
 travel mm : 10.00
 Tolerance mm : \pm 0.25
 Rated speed rpm : 880
 guide sleeve
 travel mm : 11.50
 Tolerance mm : \pm 0.50

GUIDE SLEEVE POSITION

Rated speed rpm : 800

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 720
 Aneroid pressure
 hPa : -

CONTROL LEVER

control lever
 position degree : 87.0
 tolerance degree : \pm 4.0

ASSEMBLY GOVERNOR SETTING

Rated speed rpm : 737
 rack travel mm : 11.00

Rated speed rpm : 778
 Tolerance 1/min : \pm 5
 rack travel mm : 4.00

rack travel mm : 0.50
 Tolerance mm : \pm 0.50
 Rated speed rpm : 798

Rated speed rpm : 738
 rack travel mm : 11.00

Rated speed rpm : 779
 Tolerance 1/min : \pm 5
 rack travel mm : 4.00

rack travel mm : 0.50
 Tolerance mm : \pm 0.50

Rated speed rpm : 739
 rack travel mm : 11.00

Rated speed rpm : 780
 Tolerance 1/min : \pm 5
 rack travel mm : 4.00

rack travel mm : 0.50
 Tolerance mm : \pm 0.50

Rated speed rpm : 740
 rack travel mm : 11.00

Rated speed rpm : 781
 Tolerance 1/min : \pm 5
 rack travel mm : 4.00

rack travel mm : 0.50
 Tolerance mm : \pm 0.50

Rated speed rpm : 741
 rack travel mm : 11.00

Rated speed rpm : 792
 Tolerance 1/min : \pm 5
 rack travel mm : 4.00

rack travel mm : 0.50
 Tolerance mm : \pm 0.50

Rated speed rpm : 742
 rack travel mm : 11.00

Rated speed rpm : 793
 Tolerance 1/min : \pm 5
 rack travel mm : 4.00

rack travel mm : 0.50
 Tolerance mm : \pm 0.50

START CUT-OUT

Rated speed rpm : $>$ 100
 Rated speed rpm : $<$ 660

Check
 speed 1/min : $>$ 80

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
 hPa : -
 Rated speed rpm : 750

Del. quantity
cm³/1000 strokes : 36.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 3.5
Spreed
Tolerance
cm³/1000 strokes : 3.0
Check tolerance
cm³/1000S. : 5.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.25
Tolerance mm : ± 0.75
Del. quantity
cm³/1000 strokes : 130.0
Tolerance
cm³/1000 strokes : ± 5.0
Check tolerance
cm³/1000S. : ± 8.0

LOW IDLE

Del. quantity
cm³/1000 strokes : 12.0
Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 5.0
Spreed
Tolerance
cm³/1000 strokes : 2.5
Check tolerance
cm³/1000S. : 4.5

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 30.10.92
Test oil : ISO 4113
Combination No. : 0 400 846 549
Injection pump
Pump designation : PES6A95D41ORS2471
EP type number : 0 410 896 952
Governor
Governor design. : RQV300...1250AB1089
: -2L
Governor no. : 0 420 212 190

Cust. part No. :

Customer-spec. information

Customer : KHD
Motor : BF6L913C
Power KW : 141.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet
temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde
assembly : 0 681 343 009

Opening pressure
bar : 173.5
Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : + 1.0
Firing order : 1- 5- 3- 6- 2-
: 4

Phasing : 0-60-120-180-240
: -300
Tolerance : + 0.50
Check
tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 11.65
Tolerance mm : + 0.05

Del. quantity
cm³/1000 strokes : 102.0

Tolerance
cm³/1000 strokes : + 1.0

Check tolerance
cm³/1000S. : + 3.0

Speed
Tolerance
cm³/1000 strokes : 3.5

Check tolerance
cm³/1000S. : 6.0

Rated speed rpm : 300

Rack travel in mm : 7.30
Tolerance mm : + 0.10

Del. quantity
 cm3/1000 strokes : 13.0
 Tolerance
 cm3/1000 strokes : +- 3.0
 Check tolerance
 cm3/1000S. : +- 5.5
 Spreed
 Tolerance
 cm3/1000 strokes : 3.5
 Check tolerance
 cm3/1000S. : 5.5

(B) SETTING OF INJECTION PUMP
 WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm : 300
 guide sleeve
 travel mm : 1.35
 Tolerance mm : +- 0.05

Rated speed rpm : 1290
 guide sleeve
 travel mm : 8.45
 Tolerance mm : +- 0.05

Rated speed rpm : 650
 guide sleeve
 travel mm : 3.80
 Tolerance mm : +- 0.10

Rated speed rpm : 1200
 guide sleeve
 travel mm : 7.00
 Tolerance mm : +- 0.10

GUIDE SLEEVE POSITION

Rated speed rpm : 1290

Rack travel in mm : 16.50
 Tolerance mm : +- 1.30

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1250
 Aneroid pressure
 hPa : ~
 Del. quantity
 cm3/1000 strokes : 102.0
 Tolerance
 cm3/1000 strokes : +- 1.0
 Check tolerance
 cm3/1000S. : +- 3.0
 Spreed

Tolerance
 cm3/1000 strokes : 3.5
 Check tolerance
 cm3/1000S. : 6.0

CONTROL LEVER

control lever
 position degree : 122.0
 tolerance degree : +- 4.0

RATED SPEED

rack travel mm : 10.60
 Rated speed rpm : 1295
 Tolerance 1/min : +- 5

rack travel mm : 4.00
 Rated speed rpm : 1360
 Tolerance 1/min : +- 15

rack travel mm : 0.50
 Tolerance mm : +- 0.50
 Rated speed rpm : 1500

LOW IDLE

control lever
 position degree : 73.0
 tolerance degree : +- 4.0

Testing:

Rated speed rpm : 300
 rack travel mm : 7.30
 Tolerance mm : +- 0.10

Rated speed rpm : 100

CRT mm min. : > 9.00

Rated speed rpm : 418

TORQUE CONTROL

Rated speed rpm : 1250
 rack travel mm : 11.65
 Tolerance mm : +- 0.05

Rated speed rpm : 500
 rack travel mm : 11.70
 Tolerance mm : +- 0.10

Rated speed rpm : 850

rack travel mm : 11.65
Tolerance mm : ± 0.10

START CUT-OUT

Rated speed rpm : > 100
Rated speed rpm : < 220

Check speed 1/min : > 80
Check speed 1/min : < 240

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : -
Rated speed rpm : 850
Del. quantity
cm³/1000 strokes : 97.0
Tolerance
cm³/1000 strokes : ± 1.5
Check tolerance
cm³/1000S. : ± 4.0

BREAKAWAY

Rack travel in mm : 10.60
Rated speed rpm : 1295
Tolerance 1/min : ± 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 16.00
Tolerance mm : ± 0.20
Del. quantity
cm³/1000 strokes : 127.0
Tolerance
cm³/1000 strokes : ± 5.0
Check tolerance
cm³/1000S. : ± 8.0

LOW IDLE

Rated speed rpm : 300
rack travel mm : 7.30
Tolerance mm : ± 0.10
Del. quantity
cm³/1000 strokes : 13.0

Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 5.5
Spreed
Tolerance
cm³/1000 strokes : 3.5
Check tolerance
cm³/1000S. : 5.5

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 31.05.95
Test oil : ISO 4113

Combination No. : 0 402 746 954A

Injection pump
Pump designation : PES6P120A72ORS7301
EP type number : 0 412 726 900

Governor
Governor design. : RQV300...1050PA1090K
Governor no. : 0 421 815 362

Cust. part No. : 9275449

Customer-spec. information
Customer : LIEBHERR
Motor : D 926 TI
Power kW : 230.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5
Tolerance bar : ± 0.1

Overflow quantity
min. l/h : 115
Tolerance l/h : ± 10.0

Test nozzle holder
assembly : 1 688 901 105

Opening pressure
bar : 208.5
Tolerance bar : ± 1.5

Test lines : 1 680 750 075
Outside diameter : 8.0
x inside diameter : 3.0
x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0

Prestroke mm : 4.75
Tolerance mm : ± 0.05
Check
tolerance mm : ± 0.10

Rack travel in mm : 10.50
Tolerance mm : ± 1.50

Firing order : 1- 5- 3- 6- 2-
: 4

Phasing : 0-60-120-180-240
: -300
Tolerance : ± 0.30
Check
tolerance °NW : ± 0.75

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 14.35
Tolerance mm : ± 0.05

Del. quantity
cm³/1000 strokes : 240.0

Tolerance
cm³/1000 strokes : ± 1.0

Check tolerance
 cm³/1000S. : +- 4.0

Spreed
 Tolerance
 cm³/1000 strokes : 5.0

Check tolerance
 cm³/1000S. : 9.0

Rated speed rpm : 350

Rack travel in mm : 6.10
 Tolerance mm : +- 0.20

Del. quantity
 cm³/1000 strokes : 25.0
 Tolerance
 cm³/1000 strokes : +- 3.0

Check tolerance
 cm³/1000S. : +- 6.0

Spreed
 Tolerance
 cm³/1000 strokes : 6.0
 Check tolerance
 cm³/1000S. : 10.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm : 300
 guide sleeve
 travel mm : 1.69
 Tolerance mm : +- 0.15

Rated speed rpm : 1117
 guide sleeve
 travel mm : 10.38
 Tolerance mm : +- 0.20

Rated speed rpm : 746
 guide sleeve
 travel mm : 6.20
 Tolerance mm : +- 0.25

Rated speed rpm : 353
 guide sleeve
 travel mm : 2.45
 Tolerance mm : +- 0.25

Rated speed rpm : 403
 guide sleeve
 travel mm : 3.18
 Tolerance mm : +- 0.25

Rated speed rpm : 450

guide sleeve
 travel mm : 3.66
 Tolerance mm : +- 0.25

Rated speed rpm : 1320
 guide sleeve
 travel mm : 13.50
 Tolerance mm : +- 0.50

GUIDE SLEEVE POSITION

Rated speed rpm : 1170
 Rack travel in mm : 13.00
 Tolerance mm : +- 1.30

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1050
 Aneroid pressure
 hPa : 1600
 Del. quantity
 cm³/1000 strokes : 240.0
 Tolerance
 cm³/1000 strokes : +- 1.0
 Check tolerance
 cm³/1000S. : +- 4.0
 Spreed
 Tolerance
 cm³/1000 strokes : 5.0
 Check tolerance
 cm³/1000S. : 9.0

CONTROL LEVER

control lever
 position degree : 121.0
 tolerance degree : +- 4.0

RATED SPEED

rack travel mm : 13.35
 Rated speed rpm : 1080
 Tolerance 1/min : +- 5

rack travel mm : 4.00
 Rated speed rpm : 1180
 Tolerance 1/min : +- 15

rack travel mm : 0.50
 Tolerance mm : +- 0.50
 Rated speed rpm : 1300

LOW IDLE

control lever
position degree : 79.0
tolerance degree : ± 4.0

Testing:

Rated speed rpm : 350
rack travel mm : 6.10
Tolerance mm : ± 0.10

Rated speed rpm : 250

CRT mm min. : > 9.10

Rated speed rpm : 475

TORQUE CONTROL

Rated speed rpm : 1050
rack travel mm : 14.35
Tolerance mm : ± 0.05

Rated speed rpm : 950
rack travel mm : 13.85
Tolerance mm : ± 0.10

Rated speed rpm : 900
rack travel mm : 13.70
Tolerance mm : ± 0.10

Rated speed rpm : 800
rack travel mm : 13.35
Tolerance mm : ± 0.10

Rated speed rpm : 600
rack travel mm : 12.85
Tolerance mm : ± 0.10

Rated speed rpm : 500
rack travel mm : 12.85
Tolerance mm : ± 0.10

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 1050
Pressure hPa : 1400
rack travel mm : 14.35
Tolerance mm : ± 0.05

MEASUREMENT

Pressure hPa : -

Rated speed rpm : 1050
rack travel mm : 11.90
Tolerance mm : ± 0.10

Rated speed rpm : 1050

Pressure hPa : 800
rack travel mm : 13.75
Tolerance mm : ± 0.05

Pressure hPa : 650
rack travel mm : 12.95
Tolerance mm : ± 0.10

START CUT-OUT

Rated speed rpm : > 100
Rated speed rpm : < 270

Check
speed 1/min : > 80
Check
speed 1/min : < 290

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 1600
Rated speed rpm : 800
Del. quantity
cm³/1000 strokes : 219.0
Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 6.0

Aneroid pressure
hPa : 1600
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 204.0
Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 6.0

Aneroid pressure
hPa : -
Rated speed rpm : 600
Del. quantity
cm³/1000 strokes : 185.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 4.0
Spreed
Tolerance
cm³/1000 strokes : 8.0

Check tolerance
cm³/1000S. : 12.0

BREAKAWAY

Rack travel in mm : 13.35
Rated speed rpm : 1080
Tolerance 1/min : ± 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 12.85
Tolerance mm : ± 0.20
Del. quantity
cm³/1000 strokes : 155.0
Tolerance
cm³/1000 strokes : ± 10.0
Check tolerance
cm³/1000S. : ± 14.0

LOW IDLE

Rated speed rpm : 350
rack travel mm : 6.10
Tolerance mm : ± 0.20
Del. quantity
cm³/1000 strokes : 25.0
Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 6.0
Spreed
Tolerance
cm³/1000 strokes : 6.0
Check tolerance
cm³/1000S. : 10.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 12.09.95
Test oil : ISO 4113
Combination No. : 0 400 864 088
Injection pump
Pump designation : PES4A85D410/3RS2799
EP type number : 0 410 884 944
Governor
Governor design. : RSV325...1250A2C2253
: -2L
Governor no. : 0 420 232 556
Cust. part No. :

Customer-spec. information
Customer : KHD
Motor : BF4L913
Power KW : 78.0

TEST BENCH REQUIREMENTS

Inlet line : 1.3
Test oil inlet
temp. °C : 40
Tolerance °C : +- 2.0
Overflow valve : 1 419 992 198
Inlet press. bar : 1.5
Test nozzle holder
assembly : 0 681 343 009
Opening pressure
bar : 173.5
Tolerance bar : +- 1.5
Test lines : 1 680 750 014
Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : +- 1.0
Prestroke mm : 2.50
Tolerance mm : +- 0.05
Check
tolerance mm : +- 0.10
Rack travel in mm : 10.50
Tolerance mm : +- 1.50
Firing order : 1- 3- 4- 2
Phasing : 0-90-180-270

BASIC SETTING

Rated speed rpm : 1250
Rack travel in mm : 11.75
Tolerance mm : +- 0.05
Del. quantity
cm3/1000 strokes : 84.5
Tolerance
cm3/1000 strokes : +- 0.5
Check tolerance
cm3/1000S. : +- 2.5
Spread
Tolerance
cm3/1000 strokes : 3.0
Check tolerance
cm3/1000S. : 7.0
Rated speed rpm : 325

Rack travel in mm : 7.70
 Tolerance mm : +- 0.10
 Del. quantity
 cm³/1000 strokes : 15.0
 Tolerance
 cm³/1000 strokes : +- 2.0
 Check tolerance
 cm³/1000S. : +- 4.0
 Spreed
 Tolerance
 cm³/1000 strokes : 4.5
 Check tolerance
 cm³/1000S. : 7.0

(B) SETTING OF INJECTION PUMP
 WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800
 Rack travel in mm : 0.50
 Tolerance mm : +- 0.20
 governor spring
 pre-tension
 click setting x : 4.50

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1250
 Aneroid pressure
 hPa : 1000
 Del. quantity
 cm³/1000 strokes : 84.5
 Tolerance
 cm³/1000 strokes : +- 0.5
 Check tolerance
 cm³/1000S. : +- 2.5
 Spreed
 Tolerance
 cm³/1000 strokes : 3.0
 Check tolerance
 cm³/1000S. : 7.0

CONTROL LEVER

control lever
 position degree : 102.0
 tolerance degree : +- 4.0

RATED SPEED

rack travel mm : 10.70
 Rated speed rpm : 1295
 Tolerance 1/min : +- 5

rack travel mm : 4.00
 Rated speed rpm : 1375
 Tolerance 1/min : +- 15

rack travel mm : 0.85
 Tolerance mm : +- 0.55
 Rated speed rpm : 1525

rack travel mm : 4.00
 Rated speed rpm : 1415

LOW IDLE

control lever
 position degree : 73.0
 tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 325
 rack travel mm : 7.20

Testing:

Rated speed rpm : 325
 rack travel mm : 7.70
 Tolerance mm : +- 0.10

rack travel mm : 2.00
 Rated speed rpm : 580
 Tolerance 1/min : +- 30

Rated speed rpm : 100

CRT mm min. : > 19.50

TORQUE CONTROL

Rated speed rpm : 1250
 rack travel mm : 11.75
 Tolerance mm : +- 0.05

Rated speed rpm : 500
 rack travel mm : 12.15
 Tolerance mm : +- 0.05

Rated speed rpm : 800
 rack travel mm : 12.00
 Tolerance mm : +- 0.10

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1000
rack travel mm : 12.15
Tolerance mm : +- 0.05

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 500
rack travel mm : 10.85
Tolerance mm : +- 0.05

Rated speed rpm : 500

Pressure hPa : 230
rack travel mm : 11.50
Tolerance mm : +- 0.10

Pressure hPa : 300
rack travel mm : 11.85
Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 520
Rated speed rpm : 800
Del. quantity
cm³/1000 strokes : 81.0
Tolerance
cm³/1000 strokes : +- 1.5
Check tolerance
cm³/1000S. : +- 3.5

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 59.0
Tolerance
cm³/1000 strokes : +- 1.5
Check tolerance
cm³/1000S. : +- 3.5

BREAKAWAY

Rack travel in mm : 10.70

A17

Rated speed rpm : 1295
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 17.80
Tolerance mm : +- 0.20
Del. quantity
cm³/1000 strokes : 125.0
Tolerance
cm³/1000 strokes : +- 7.5
Check tolerance
cm³/1000S. : +- 10.0

LOW IDLE

Rated speed rpm : 325
rack travel mm : 7.70
Tolerance mm : +- 0.10
Del. quantity
cm³/1000 strokes : 15.0
Tolerance
cm³/1000 strokes : +- 2.0
Check tolerance
cm³/1000S. : +- 4.0
Speed
Tolerance
cm³/1000 strokes : 4.5
Check tolerance
cm³/1000S. : 7.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 11.09.95
Test oil : ISO 4113
Combination No. : 0 400 866 080
Injection pump
Pump designation : PES6A85D410/3RS2415
EP type number : 0 410 886 915
Governor
Governor design. : RSV325...1400A8C809L
Governor no. : 0 420 232 610
Cust. part No. : 0423 1249 KY 0150
 : -17

Customer-spec. information
Customer : KHD
Motor : BF6L913
Power KW : 118.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet
temp. °C : 40
Tolerance °C : +- 2.0
Overflow valve : 1 419 992 128
Inlet press. bar : 1.5
Test nozzle holder
assembly : 0 681 343 009
Opening pressure
bar : 173.5
Tolerance bar : +- 1.5
Test lines : 1 680 750 014
Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : +- 1.0
Prestroke mm : 1.95
Tolerance mm : +- 0.05
Check
tolerance mm : +- 0.10
Rack travel in mm : 10.50
Tolerance mm : +- 1.50
Firing order : 1- 5- 3- 6- 2-
 : 4
Phasing : 0-60-120-180-240
 : -300

BASIC SETTING

Rated speed rpm : 1400
Rack travel in mm : 10.85
Tolerance mm : +- 0.05
Del. quantity
cm3/1000 strokes : 76.5
Tolerance
cm3/1000 strokes : +- 0.5
Check tolerance
cm3/1000S. : +- 2.5
Speed
Tolerance
cm3/1000 strokes : 3.0
Check tolerance
cm3/1000S. : 7.0

Rated speed rpm : 325
 Rack travel in mm : 8.00
 Tolerance mm : +- 0.10
 Del. quantity
 cm3/1000 strokes : 12.5
 Tolerance
 cm3/1000 strokes : +- 2.0
 Check tolerance
 cm3/1000S. : +- 4.0
 Spreed
 Tolerance
 cm3/1000 strokes : 4.5
 Check tolerance
 cm3/1000S. : 7.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800
 Rack travel in mm : 0.50
 Tolerance mm : +- 0.20
 governor spring
 pre-tension
 click setting x : 5.25

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1400
 Aneroid pressure
 hPa : 700
 Del. quantity
 cm3/1000 strokes : 76.5
 Tolerance
 cm3/1000 strokes : +- 0.5
 Check tolerance
 cm3/1000S. : +- 2.5
 Spreed
 Tolerance
 cm3/1000 strokes : 3.0
 Check tolerance
 cm3/1000S. : 7.0

CONTROL LEVER

control lever
 position degree : 119.0

RATED SPEED

A19

rack travel mm : 9.80
 Rated speed rpm : 1445
 Tolerance 1/min : +- 5
 rack travel mm : 4.00
 Rated speed rpm : 1485
 Tolerance 1/min : +- 15
 rack travel mm : 0.85
 Tolerance mm : +- 0.55
 Rated speed rpm : 1600
 rack travel mm : 4.00
 Rated speed rpm : 1520

LOW IDLE

control lever
 position degree : 68.0

Setting point w/out bumper spring

Rated speed rpm : 325
 rack travel mm : 7.50

Testing:

Rated speed rpm : 325
 rack travel mm : 8.00
 Tolerance mm : +- 0.10

rack travel mm : 2.00
 Rated speed rpm : 630
 Tolerance 1/min : +- 30

Rated speed rpm : 100

CRT mm min. : > 19.50

TORQUE CONTROL

Rated speed rpm : 1400
 rack travel mm : 10.85
 Tolerance mm : +- 0.05

Rated speed rpm : 500
 rack travel mm : 12.05
 Tolerance mm : +- 0.05

Rated speed rpm : 1040
 rack travel mm : 11.50
 Tolerance mm : +- 0.10

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 700
rack travel mm : 12.05
Tolerance mm : ± 0.05

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 500
rack travel mm : 10.25
Tolerance mm : ± 0.05

Rated speed rpm : 500

Pressure hPa : 95
rack travel mm : 10.70
Tolerance mm : ± 0.10

Pressure hPa : 360
rack travel mm : 11.75
Tolerance mm : ± 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 45.5
Tolerance
cm³/1000 strokes : ± 0.5
Check tolerance
cm³/1000s. : ± 2.5

BREAKAWAY

Rack travel in mm : 9.80
Rated speed rpm : 1445
Tolerance 1/min : ± 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 17.20
Tolerance mm : ± 0.20

A20

Del. quantity
cm³/1000 strokes : 110.0
Tolerance
cm³/1000 strokes : ± 7.5
Check tolerance
cm³/1000s. : ± 10.0

LOW IDLE

Rated speed rpm : 325
rack travel mm : 8.00
Tolerance mm : ± 0.10
Del. quantity
cm³/1000 strokes : 12.5
Tolerance
cm³/1000 strokes : ± 2.0
Check tolerance
cm³/1000s. : ± 4.0
Spread
Tolerance
cm³/1000 strokes : 4.5
Check tolerance
cm³/1000s. : 7.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 08.09.95
Test oil : ISO 4113

Combination No. : 0 400 866 221

Injection pump
Pump designation : PES6A95D410/3RS2876
EP type number : 0 410 896 886

Governor
Governor design. : RSV325...900A7C720L
Governor no. : 0 420 232 339

Cust. part No. : 0 423 1366 KY0150
 : -17

Customer-spec. information

Customer : KHD
Motor : BF6L913C
Power KW : 102.0

TEST BENCH REQUIREMENTS

Inlet line : 1.3

Test oil inlet
temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde
assembly : 0 681 343 009

Opening pressure
bar : 173.5
Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

A21

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : +- 1.0

Prestroke mm : 2.65
Tolerance mm : +- 0.05
Check
tolerance mm : +- 0.10

Rack travel in mm : 10.50
Tolerance mm : +- 1.50

Firing order : 1- 5- 3- 6- 2-
 : 4

Phasing : 0-60-120-180-240
 : -300
Tolerance : +- 0.50
Check
tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm : 13.10
Tolerance mm : +- 0.05

Del. quantity
cm³/1000 strokes : 92.0

Tolerance
cm³/1000 strokes : +- 1.0

Check tolerance
cm³/1000s. : +- 3.0

Speed

Tolerance
 cm³/1000 strokes : 3.5

Check tolerance
 cm³/1000S. : 8.0

Rated speed rpm : 325

Rack travel in mm : 6.80
 Tolerance mm : +- 0.10

Del. quantity
 cm³/1000 strokes : 12.0
 Tolerance
 cm³/1000 strokes : +- 2.0
 Check tolerance
 cm³/1000S. : +- 4.5

Spreed
 Tolerance
 cm³/1000 strokes : 5.5
 Check tolerance
 cm³/1000S. : 9.0

(B) SETTING OF INJECTION PUMP
 WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800

Rack travel in mm : 0.50
 Tolerance mm : +- 0.20

governor spring
 pre-tension
 click setting x : 4.00

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 900
 Aneroid pressure
 hPa : -

Del. quantity
 cm³/1000 strokes : 92.0
 Tolerance
 cm³/1000 strokes : +- 1.0
 Check tolerance
 cm³/1000S. : +- 3.0

Spreed
 Tolerance
 cm³/1000 strokes : 3.5
 Check tolerance
 cm³/1000S. : 8.0

CONTROL LEVER

control lever
 position degree : 99.0
 tolerance degree : +- 4.0

RATED SPEED

rack travel mm : 12.10
 Rated speed rpm : 945
 Tolerance 1/min : +- 5

rack travel mm : 4.00
 Rated speed rpm : 965
 Tolerance 1/min : +- 15

rack travel mm : 0.85
 Tolerance mm : +- 0.55
 Rated speed rpm : 1100

rack travel mm : 4.00
 Rated speed rpm : 985

LOW IDLE

control lever
 position degree : 66.0
 tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 325
 rack travel mm : 6.30

Testing:

Rated speed rpm : 325
 rack travel mm : 6.80
 Tolerance mm : +- 0.10

rack travel mm : 2.00
 Rated speed rpm : 400
 Tolerance 1/min : +- 30

TORQUE CONTROL

Rated speed rpm : 900
 rack travel mm : 13.10
 Tolerance mm : +- 0.05

Rated speed rpm : 600
 rack travel mm : 13.15
 Tolerance mm : +- 0.05

BREAKAWAY

Rack travel in mm : 12.10
Rated speed rpm : 945
Tolerance 1/min : \pm 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 13.70
Tolerance mm : \pm 0.20
Del. quantity
cm³/1000 strokes : 105.0
Tolerance
cm³/1000 strokes : \pm 7.5
Check tolerance
cm³/1000S. : \pm 10.0

LOW IDLE

Rated speed rpm : 325
rack travel mm : 6.80
Tolerance mm : \pm 0.10
Del. quantity
cm³/1000 strokes : 12.0
Tolerance
cm³/1000 strokes : \pm 2.0
Check tolerance
cm³/1000S. : \pm 4.5
Spreed
Tolerance
cm³/1000 strokes : 5.5
Check tolerance
cm³/1000S. : 9.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 06.09.95
Test oil : ISO 4113
Combination No. : 0 402 046 789
Injection pump
Pump designation : PES6P120A320RS3139
EP type number : 0 412 026 718
Governor
Governor design. : RQV275...1000PA728
: -3
Governor no. : 0 421 813 657
Cust. part No. : CCEP 5070 -116

Customer-spec. information
Customer : RVI
Motor : MIDR 062045 H
Power KW : 227.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0
Overflow valve : 2 417 413 071
Inlet press. bar : 2.5
Test nozzle holder
assembly : 1 688 901 019
Opening pressure
bar : 208.5
Tolerance bar : ± 1.5
Test lines : 1 680 750 075
Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0
Prestroke mm : 3.55
Tolerance mm : ± 0.05
Check
tolerance mm : ± 0.10
Rack travel in mm : 10.50
Tolerance mm : ± 1.50
Firing order : 1- 5- 3- 6- 2-
: 4
Phasing : 0-60-120-180-240
: -300
Tolerance : ± 0.30
Check
tolerance °NW : ± 0.50
Start of delivery mark
Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000
Rack travel in mm : 11.15
Tolerance mm : ± 0.05
Del. quantity
cm³/1000 strokes : 197.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 4.0

Spreed
Tolerance
cm³/1000 strokes : 5.0

Check tolerance
cm³/1000S. : 9.0

Del. quantity
cm³/1000 strokes : 27.0
Tolerance
cm³/1000 strokes : +- 2.0
Check tolerance
cm³/1000S. : +- 5.0

Spreed
Tolerance
cm³/1000 strokes : 8.0
Check tolerance
cm³/1000S. : 12.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 1170

Rack travel in mm : 16.50
Tolerance mm : +- 1.30

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1000
Aneroid pressure
hPa : 1000
Del. quantity
cm³/1000 strokes : 197.0
Tolerance
cm³/1000 strokes : +- 1.0
Check tolerance
cm³/1000S. : +- 4.0
Spreed
Tolerance
cm³/1000 strokes : 5.0
Check tolerance
cm³/1000S. : 9.0

CONTROL LEVER

control lever
position degree : 119.0
tolerance degree : +- 4.0

RATED SPEED

rack travel mm : -1.00
Rated speed rpm : 1080
Tolerance 1/min : +- 5

rack travel mm : -7.15
Rated speed rpm : 1195
Tolerance 1/min : +- 15

rack travel mm : -10.65
Tolerance mm : +- 0.50
Rated speed rpm : 1300

LOW IDLE

control lever
position degree : 67.0
tolerance degree : +- 4.0

Testing:

Rated speed rpm : 275
rack travel mm : -5.30
Tolerance mm : +- 0.15

Rated speed rpm : 200

CRT mm max. : < -3.80

Rated speed rpm : 370

TORQUE CONTROL

Rated speed rpm : 600

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1000

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 500
rack travel mm : -2.20
Tolerance mm : +- 0.20

Rated speed rpm : 500

Pressure hPa : 160
rack travel mm : -1.70

Tolerance mm : \pm 0.10
Pressure hPa : 280
rack travel mm : -0.75
Tolerance mm : \pm 0.05

START CUT-OUT

Rated speed rpm : $>$ 100
Rated speed rpm : $<$ 195
Check
speed 1/min : $>$ 80
Check
speed 1/min : $<$ 215

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 1000
Rated speed rpm : 600
Del. quantity
cm³/1000 strokes : 197.0
Tolerance
cm³/1000 strokes : \pm 3.0
Check tolerance
cm³/1000S. : \pm 6.0

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 104.0
Tolerance
cm³/1000 strokes : \pm 1.0
Check tolerance
cm³/1000S. : \pm 4.0

BREAKAWAY

Rack travel in mm : -1.00
Rated speed rpm : 1080
Tolerance 1/min : \pm 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm³/1000 strokes : 145.0
Tolerance
cm³/1000 strokes : \pm 10.0
Check tolerance
cm³/1000S. : \pm 14.0

LOW IDLE

Del. quantity
cm³/1000 strokes : 27.0
Tolerance
cm³/1000 strokes : \pm 2.0
Check tolerance
cm³/1000S. : \pm 5.0
Speed
Tolerance
cm³/1000 strokes : 8.0
Check tolerance
cm³/1000S. : 12.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 24.08.95
Test oil : ISO 4113

Combination No. : 0 400 464 116

Injection pump
Pump designation : PES4A75D410/3RS1255
EP type number : 0 410 474 966

Governor
Governor design. : RSV325...900A7C602L
Governor no. : 0 420 232 320

Cust. part No. :

Customer-spec. information
Customer : KHD
Motor : F4L912

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0

Overflow valve : 1 417 413 000

Inlet press. bar : 1.0

Test nozzle holder
assembly : 0 681 343 009

Opening pressure
bar : 173.5
Tolerance bar : ± 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0

Firing order : 1- 3- 4- 2

Phasing : 0-90-180-270
Tolerance : ± 0.50
Check
tolerance °NW : ± 0.75

BASIC SETTING

Rated speed rpm : 880

Rack travel in mm : 11.25
Tolerance mm : ± 0.05

Del. quantity
cm³/1000 strokes : 44.0

Tolerance
cm³/1000 strokes : ± 0.5

Check tolerance
cm³/1000S. : ± 2.0

Speed
Tolerance
cm³/1000 strokes : 2.0

Check tolerance
cm³/1000S. : 3.5

Rated speed rpm : 325

Rack travel in mm : 8.70
Tolerance mm : ± 0.20

Del. quantity
cm³/1000 strokes : 12.0
Tolerance
cm³/1000 strokes : ± 3.0

Check tolerance
cm³/1000S. : + 4.5
Spreed
Tolerance
cm³/1000 strokes : 2.0
Check tolerance
cm³/1000S. : 3.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800
Rack travel in mm : 0.65
Tolerance mm : + 0.35

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 880
Aneroid pressure
hPa : -
Del. quantity
cm³/1000 strokes : 44.0
Tolerance
cm³/1000 strokes : + 0.5
Check tolerance
cm³/1000S. : + 2.0
Spreed
Tolerance
cm³/1000 strokes : 2.0
Check tolerance
cm³/1000S. : 3.5

CONTROL LEVER

control lever
position degree : 54.0
tolerance degree : + 4.0

RATED SPEED

rack travel mm : 10.20
Rated speed rpm : 925
Tolerance 1/min : + 5

rack travel mm : 4.00
Rated speed rpm : 960
Tolerance 1/min : + 15

rack travel mm : 1.00
Tolerance mm : + 0.70
Rated speed rpm : 1050

LOW IDLE

control lever
position degree : 25.0
tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 325
rack travel mm : 8.70

Testing:

Rated speed rpm : 325
rack travel mm : 8.20
Tolerance mm : + 0.10

rack travel mm : 2.00
Rated speed rpm : 450
Tolerance 1/min : + 30

Rated speed rpm : 100

CRT mm min. : > 19.50

TORQUE CONTROL

Rated speed rpm : 880
rack travel mm : 11.25
Tolerance mm : + 0.05

Rated speed rpm : 500
rack travel mm : 11.30
Tolerance mm : + 0.10

BREAKAWAY

Rack travel in mm : 10.20
Rated speed rpm : 925
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100

LOW IDLE

Rated speed rpm : 325
rack travel mm : 8.70
Tolerance mm : +- 0.20
Del. quantity
cm³/1000 strokes : 12.0
Tolerance
cm³/1000 strokes : +- 3.0
Check tolerance
cm³/1000S. : +- 4.5
Spreed
Tolerance
cm³/1000 strokes : 2.0
Check tolerance
cm³/1000S. : 3.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 04.05.95
Test oil : ISO 4113
Combination No. : 0 400 464 118
Injection pump
Pump designation : PES4A75D410/3RS1255
EP type number : 0 410 474 966
Governor
Governor design. : RSV325...1400A8C742L
Governor no. : 0 420 232 342

Cust. part No. :

Customer-spec. information
Customer : KHD
Motor : F4L912

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet temp. °C : 40
Tolerance °C : +- 2.0
Overflow valve : 1 419 992 198
Inlet press. bar : 1.5
Test nozzle holder assembly : 0 681 343 009
Opening pressure bar : 173.5
Tolerance bar : +- 1.5
Test lines : 1 680 750 014
Outside diameter : 6.0
x inside diameter : 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant. per values

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : +- 1.0
Firing order : 1- 3- 4- 2
Phasing : 0-90-180-270
Tolerance : +- 0.50
Check tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1400
Rack travel in mm : 11.55
Tolerance mm : +- 0.05
Del. quantity cm3/1000 strokes : 55.5
Tolerance cm3/1000 strokes : +- 0.5
Check tolerance cm3/1000S. : +- 2.0
Speed Tolerance cm3/1000 strokes : 2.0
Check tolerance cm3/1000S. : 3.5
Rated speed rpm : 325
Rack travel in mm : 6.00
Tolerance mm : +- 0.20
Del. quantity cm3/1000 strokes : 12.0
Tolerance cm3/1000 strokes : +- 3.0

Check tolerance
cm³/1000S. : + 4.5
Spreed
Tolerance
cm³/1000 strokes : 2.0
Check tolerance
cm³/1000S. : 3.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800
Rack travel in mm : 0.50
Tolerance mm : + 0.20
governor spring
pre-tension
click setting x : 4.75

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1400
Aneroid pressure
hPa : -
Del. quantity
cm³/1000 strokes : 55.5
Tolerance
cm³/1000 strokes : + 0.5
Check tolerance
cm³/1000S. : + 2.0
Spreed
Tolerance
cm³/1000 strokes : 2.0
Check tolerance
cm³/1000S. : 3.5

CONTROL LEVER

control lever
position degree : 72.0
tolerance degree : + 4.0

RATED SPEED

rack travel mm : 10.00
Rated speed rpm : 1445
Tolerance 1/min : + 5
rack travel mm : 4.00
Rated speed rpm : 1485
Tolerance 1/min : + 15

rack travel mm : 0.85
Tolerance mm : + 0.55
Rated speed rpm : 1600

rack travel mm : 4.00
Rated speed rpm : 1500

LOW IDLE

control lever
position degree : 14.0
tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 325
rack travel mm : 5.50

Testing:

Rated speed rpm : 325
rack travel mm : 6.00
Tolerance mm : + 0.10

rack travel mm : 2.00
Rated speed rpm : 550
Tolerance 1/min : + 30

TORQUE CONTROL

Dimension a mm : 0.90
Rated speed rpm : 1400
rack travel mm : 11.55
Tolerance mm : + 0.05

Rated speed rpm : 500
rack travel mm : 12.45
Tolerance mm : + 0.05

Rated speed rpm : 900
rack travel mm : 12.30
Tolerance mm : + 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : -
Rated speed rpm : 800
Del. quantity
cm³/1000 strokes : 51.0

Tolerance
cm³/1000 strokes : + 1.0
Check tolerance
cm³/1000S. : + 3.0

BREAKAWAY

Rack travel in mm : 10.00
Rated speed rpm : 1445
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.25
Tolerance mm : + 0.75
Del. quantity
cm³/1000 strokes : 110.0
Tolerance
cm³/1000 strokes : + 5.0
Check tolerance
cm³/1000S. : + 8.0

LOW IDLE

Rated speed rpm : 325
rack travel mm : 6.00
Tolerance mm : + 0.20
Del. quantity
cm³/1000 strokes : 12.0
Tolerance
cm³/1000 strokes : + 3.0
Check tolerance
cm³/1000S. : + 4.5
Speed
Tolerance
cm³/1000 strokes : 2.0
Check tolerance
cm³/1000S. : 3.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 27.07.92
Test oil : ISO 4113
Combination No. : 0 400 466 099
Injection pump
Pump designation : PES6A75D410/3RS1360
EP type number : 0 410 476 976
Governor
Governor design. : RSV325...1150A8C494
: -4L
Governor no. : 0 420 232 572

Cust. part No. :

Customer-spec. information
Customer : KHD
Motor : F6L912
Power KW : 74.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0
Overflow valve : 1 419 992 198
Inlet press. bar : 1.5
Test nozzle holder
assembly : 0 681 343 009
Opening pressure
bar : 173.5
Tolerance bar : ± 1.5
Test Lines : 1 680 750 014
Outside diameter : 6.0

B05

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0
Firing order : 1- 5- 3- 6- 2-
: 4
Phasing : 0-60-120-180-240
: -300
Tolerance : ± 0.50
Check
tolerance °NW : ± 0.75

BASIC SETTING

Rated speed rpm : 1150
Rack travel in mm : 11.15
Tolerance mm : ± 0.05
Del. quantity
cm³/1000 strokes : 52.0
Tolerance
cm³/1000 strokes : ± 0.5
Check tolerance
cm³/1000s. : ± 2.0
Spreed
Tolerance
cm³/1000 strokes : 2.5
Check tolerance
cm³/1000s. : 4.0
Del. quantity
cm³/1000 strokes : 13.0
Tolerance
cm³/1000 strokes : ± 3.0

Check tolerance
cm³/1000S. : + 4.5
Spreed
Tolerance
cm³/1000 strokes : 2.0
Check tolerance
cm³/1000S. : 3.5

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800
Rack travel in mm : 0.65
Tolerance mm : + 0.35
governor spring
pre-tension
click setting x : 4.20

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1150
Aneroid pressure
hPa : -
Del. quantity
cm³/1000 strokes : 52.0
Tolerance
cm³/1000 strokes : + 0.5
Check tolerance
cm³/1000S. : + 2.0
Spreed
Tolerance
cm³/1000 strokes : 2.5
Check tolerance
cm³/1000S. : 4.0

CONTROL LEVER

control lever
position degree : 106.0
tolerance degree : + 4.0

RATED SPEED

rack travel mm : 10.10
Rated speed rpm : 1195
Tolerance 1/min : + 5
rack travel mm : 4.00
Rated speed rpm : 1240
Tolerance 1/min : + 15

rack travel mm : 0.85
Tolerance mm : + 0.55
Rated speed rpm : 1350

rack travel mm : 4.00
Rated speed rpm : 1250

LOW IDLE

control lever
position degree : 71.0
tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 325
rack travel mm : 7.20

Testing:

Rated speed rpm : 325
rack travel mm : 6.70
Tolerance mm : + 0.10

rack travel mm : 2.00
Rated speed rpm : 465
Tolerance 1/min : + 30

Rated speed rpm : 100

CRT mm min. : > 19.50

TORQUE CONTROL

Rated speed rpm : 1150
rack travel mm : 11.15
Tolerance mm : + 0.05

Rated speed rpm : 750
rack travel mm : 12.40
Tolerance mm : + 0.10

Rated speed rpm : 950
rack travel mm : 11.70
Tolerance mm : + 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : -
Rated speed rpm : 750

Del. quantity
cm³/1000 strokes : 56.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 3.0

BREAKAWAY

Rack travel in mm : 10.10
Rated speed rpm : 1195
Tolerance 1/min : ± 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.25
Tolerance mm : ± 0.75
Del. quantity
cm³/1000 strokes : 120.0
Tolerance
cm³/1000 strokes : ± 5.0
Check tolerance
cm³/1000S. : ± 8.0

LOW IDLE

Del. quantity
cm³/1000 strokes : 13.0
Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 4.5
Speed
Tolerance
cm³/1000 strokes : 2.0
Check tolerance
cm³/1000S. : 3.5

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 29.05.95
Test oil : ISO 4113

Combination No. : 0 400 863 012

Injection pump
Pump designation : PES3A85D410/3RS2731
EP type number : 0 410 883 988

Governor
Governor design. : RSV325...1250A2C2168
: -3L
Governor no. : 0 420 232 475

Cust. part No. :

Customer-spec. information

Customer : KHD
Motor : F3L913
Power KW : 44.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet
temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 417 413 000

Inlet press. bar : 1.0

Test nozzle holder
assembly : 0 681 343 009

Opening pressure
bar : 173.5
Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : +- 1.0
Firing order : 1- 3- 2

Phasing : 0-120-240
Tolerance : +- 0.50
Check
tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 9.95
Tolerance mm : +- 0.05

Del. quantity
cm³/1000 strokes : 69.0

Tolerance
cm³/1000 strokes : +- 0.5

Check tolerance
cm³/1000S. : +- 2.5

Speed
Tolerance
cm³/1000 strokes : 3.0

Check tolerance
cm³/1000S. : 5.0

Rated speed rpm : 325

Rack travel in mm : 6.30
Tolerance mm : +- 0.20
Del. quantity
cm³/1000 strokes : 13.0

Tolerance
 cm³/1000 strokes : +- 3.0
 Check tolerance
 cm³/1000S. : +- 5.0
 Spreed
 Tolerance
 cm³/1000 strokes : 2.5
 Check tolerance
 cm³/1000S. : 4.5

(B) SETTING OF INJECTION PUMP
 WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800
 Rack travel in mm : 0.50
 Tolerance mm : +- 0.20
 governor spring
 pre-tension
 click setting x : 4.50

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1250
 Aneroid pressure
 hPa : -
 Del. quantity
 cm³/1000 strokes : 69.0
 Tolerance
 cm³/1000 strokes : +- 0.5
 Check tolerance
 cm³/1000S. : +- 2.5
 Spreed
 Tolerance
 cm³/1000 strokes : 3.0
 Check tolerance
 cm³/1000S. : 5.0

CONTROL LEVER

control lever
 position degree : 95.0
 tolerance degree : +- 4.0

RATED SPEED

rack travel mm : 8.90
 Rated speed rpm : 1295
 Tolerance 1/min : +- 5
 rack travel mm : 4.00

Rated speed rpm : 1330
 Tolerance 1/min : +- 15
 rack travel mm : 0.85
 Tolerance mm : +- 0.55
 Rated speed rpm : 1500
 rack travel mm : 4.00
 Rated speed rpm : 1345

LOW IDLE

control lever
 position degree : 66.0
 tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 325
 rack travel mm : 5.80

Testing:

Rated speed rpm : 325
 rack travel mm : 6.30
 Tolerance mm : +- 0.10

rack travel mm : 2.00
 Rated speed rpm : 490
 Tolerance 1/min : +- 30

Rated speed rpm : 100

CRT mm min. : > 19.50

TORQUE CONTROL

Dimension a mm : 0.40
 Rated speed rpm : 1250
 rack travel mm : 9.95
 Tolerance mm : +- 0.05

Rated speed rpm : 500
 rack travel mm : 10.25
 Tolerance mm : +- 0.05

Rated speed rpm : 960
 rack travel mm : 10.00
 Tolerance mm : +- 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : -
Rated speed rpm : 800
Del. quantity
cm³/1000 strokes : 59.0
Tolerance
cm³/1000 strokes : +- 1.0
Check tolerance
cm³/1000S. : +- 3.5

BREAKAWAY

Rack travel in mm : 8.90
Rated speed rpm : 1295
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 17.10
Tolerance mm : +- 0.10
Del. quantity
cm³/1000 strokes : 120.0
Tolerance
cm³/1000 strokes : +- 5.0
Check tolerance
cm³/1000S. : +- 8.0

LOW IDLE

Rated speed rpm : 325
rack travel mm : 6.30
Tolerance mm : +- 0.20
Del. quantity
cm³/1000 strokes : 13.0
Tolerance
cm³/1000 strokes : +- 3.0
Check tolerance
cm³/1000S. : +- 5.0
Spreed
Tolerance
cm³/1000 strokes : 2.5
Check tolerance
cm³/1000S. : 4.5

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 28.04.95
Test oil : ISO 4113
Combination No. : 0 400 863 014
Injection pump
Pump designation : PES3A85D410/3RS2642
EP type number : 0 410 883 989
Governor
Governor design. : RSV325...1000A8C2102
: -2L
Governor no. : 0 420 232 507
Cust. part No. :

Customer-spec. information
Customer : KHD
Motor : F3L913
Power KW : 37.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet temp. °C : 40
Tolerance °C : ± 2.0
Overflow valve : 1 417 413 000
Inlet press. bar : 1.5
Test nozzle holder assembly : 0 681 343 009
Opening pressure bar : 173.5
Tolerance bar : ± 1.5
Test lines : 1 680 750 014
Outside diameter : 6.0

B11

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0
Firing order : 1- 3- 2
Phasing : 0-120-240
Tolerance : ± 0.50
Check tolerance °NW : ± 0.75

BASIC SETTING

Rated speed rpm : 1000
Rack travel in mm : 10.05
Tolerance mm : ± 0.05
Del. quantity cm³/1000 strokes : 63.0
Tolerance cm³/1000 strokes : ± 0.5
Check tolerance cm³/1000s. : ± 2.5
Speed Tolerance cm³/1000 strokes : 3.0
Check tolerance cm³/1000s. : 5.0
Rated speed rpm : 325
Rack travel in mm : 7.60
Tolerance mm : ± 0.20
Del. quantity cm³/1000 strokes : 12.0

Tolerance
 cm³/1000 strokes : + 3.0
 Check tolerance
 cm³/1000S. : + 5.0
 Spreed
 Tolerance
 cm³/1000 strokes : 2.5
 Check tolerance
 cm³/1000S. : 4.5

(B) SETTING OF INJECTION PUMP
 WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800
 Rack travel in mm : 0.50
 Tolerance mm : + 0.20
 governor spring
 pre-tension
 click setting x : 4.30

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1000
 Aneroid pressure
 hPa : -
 Del. quantity
 cm³/1000 strokes : 63.0
 Tolerance
 cm³/1000 strokes : + 0.5
 Check tolerance
 cm³/1000S. : + 2.5
 Spreed
 Tolerance
 cm³/1000 strokes : 3.0
 Check tolerance
 cm³/1000S. : 5.0

CONTROL LEVER

control lever
 position degree : 94.0
 tolerance degree : + 4.0

RATED SPEED

rack travel mm : 9.00
 Rated speed rpm : 1045
 Tolerance 1/min : + 5
 rack travel mm : 4.00

Rated speed rpm : 1075
 Tolerance 1/min : + 15
 rack travel mm : 0.85
 Tolerance mm : + 0.55
 Rated speed rpm : 1240
 rack travel mm : 4.00
 Rated speed rpm : 1090

LOW IDLE

control lever
 position degree : 67.0
 tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 325
 rack travel mm : 7.10

Testing:

Rated speed rpm : 325
 rack travel mm : 7.60
 Tolerance mm : + 0.10

rack travel mm : 2.00
 Rated speed rpm : 440
 Tolerance 1/min : + 30

Rated speed rpm : 100

CRT mm min. : > 19.50

TORQUE CONTROL

Dimension a mm : 0.50
 Rated speed rpm : 1000
 rack travel mm : 10.05
 Tolerance mm : + 0.05

Rated speed rpm : 500
 rack travel mm : 10.55
 Tolerance mm : + 0.05

Rated speed rpm : 855
 rack travel mm : 10.30
 Tolerance mm : + 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : -
Rated speed rpm : 750
Del. quantity
cm³/1000 strokes : 60.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 3.5

BREAKAWAY

Rack travel in mm : 9.00
Rated speed rpm : 1045
Tolerance 1/min : ± 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.25
Tolerance mm : ± 0.75
Del. quantity
cm³/1000 strokes : 140.0
Tolerance
cm³/1000 strokes : ± 5.0
Check tolerance
cm³/1000S. : ± 8.0

LOW IDLE

Rated speed rpm : 325
rack travel mm : 7.60
Tolerance mm : ± 0.20
Del. quantity
cm³/1000 strokes : 12.0
Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 5.0
Spreed
Tolerance
cm³/1000 strokes : 2.5
Check tolerance
cm³/1000S. : 4.5

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 17.06.95
Test oil : ISO 4113
Combination No. : 0 400 864 054
Injection pump
Pump designation : PES4A85D410/3RS2638
EP type number : 0 410 884 950
Governor
Governor design. : RSV325...115QA0C2168
: L
Governor no. : 0 420 232 364
Cust. part No. :

Customer-spec. information

Customer : KHD
Motor : BF4L913
Power KW : 66.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet temp. °C : 40
Tolerance °C : ± 2.0
Overflow valve : 1 417 413 000
Inlet press. bar : 1.5
Test nozzle holder assembly : 0 681 343 009
Opening pressure bar : 173.5
Tolerance bar : ± 1.5
Test lines : 1 680 750 014
Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0
Firing order : 1- 3- 4- 2
Phasing : 0-90-180-270
Tolerance : ± 0.50
Check tolerance °NW : ± 0.75

BASIC SETTING

Rated speed rpm : 1110
Rack travel in mm : 12.35
Tolerance mm : ± 0.05
Del. quantity cm³/1000 strokes : 80.5
Tolerance cm³/1000 strokes : ± 0.5
Check tolerance cm³/1000S. : ± 2.5
Speed Tolerance cm³/1000 strokes : 3.0
Check tolerance cm³/1000S. : 4.5
Rated speed rpm : 325
Rack travel in mm : 7.70
Tolerance mm : ± 0.20
Del. quantity cm³/1000 strokes : 12.0

Tolerance
 cm³/1000 strokes : +- 3.0
 Check tolerance
 cm³/1000S. : +- 5.0
 Spreed
 Tolerance
 cm³/1000 strokes : 2.0
 Check tolerance
 cm³/1000S. : 4.0

(B) SETTING OF INJECTION PUMP
 WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800
 Rack travel in mm : 0.50
 Tolerance mm : +- 0.20
 governor spring
 pre-tension
 click setting x : 4.75

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1110
 Aneroid pressure
 hPa : -
 Del. quantity
 cm³/1000 strokes : 80.5
 Tolerance
 cm³/1000 strokes : +- 0.5
 Check tolerance
 cm³/1000S. : +- 2.5
 Spreed
 Tolerance
 cm³/1000 strokes : 3.0
 Check tolerance
 cm³/1000S. : 4.5

CONTROL LEVER

control lever
 position degree : 105.0
 tolerance degree : +- 4.0

RATED SPEED

rack travel mm : 11.30
 Rated speed rpm : 1160
 Tolerance 1/min : +- 5
 rack travel mm : 4.00

Rated speed rpm : 1265
 Tolerance 1/min : +- 15
 rack travel mm : 0.85
 Tolerance mm : +- 0.55
 Rated speed rpm : 1430
 rack travel mm : 4.00
 Rated speed rpm : 1335

LOW IDLE

control lever
 position degree : 81.0
 tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 325
 rack travel mm : 7.70

Testing:

Rated speed rpm : 325
 rack travel mm : 7.20
 Tolerance mm : +- 0.10

rack travel mm : 2.00
 Rated speed rpm : 555
 Tolerance 1/min : +- 25

Rated speed rpm : 100

CRT mm min. : > 19.50

TORQUE CONTROL

Rated speed rpm : 1110
 rack travel mm : 12.35
 Tolerance mm : +- 0.05

Rated speed rpm : 500
 rack travel mm : 13.15
 Tolerance mm : +- 0.05

Rated speed rpm : 940
 rack travel mm : 12.80
 Tolerance mm : +- 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : -
Rated speed rpm : 700
Del. quantity
cm³/1000 strokes : 80.5
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 3.5

BREAKAWAY

Rack travel in mm : 11.30
Rated speed rpm : 1160
Tolerance 1/min : ± 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 17.00
Tolerance mm : ± 0.20
Del. quantity
cm³/1000 strokes : 105.0
Tolerance
cm³/1000 strokes : ± 5.0
Check tolerance
cm³/1000S. : ± 8.0

LOW IDLE

Rated speed rpm : 325
rack travel mm : 7.70
Tolerance mm : ± 0.20
Del. quantity
cm³/1000 strokes : 12.0
Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 5.0
Spreed
Tolerance
cm³/1000 strokes : 2.0
Check tolerance
cm³/1000S. : 4.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 18.09.95
Test oil : ISO 4113
Combination No. : 0 400 864 087
Injection pump
Pump designation : PES4A85D410/3RS2799
EP type number : 0 410 884 944
Governor
Governor design. : RSV325...1075A8C2253
: -1L
Governor no. : 0 420 232 555
Cust. part No. :

Customer-spec. information

Customer : KHD
Motor : BF4L913
Power KW : 65.0

TEST BENCH REQUIREMENTS

Inlet line : 1.3
Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0
Overflow valve : 1 419 922 198
Inlet press. bar : 1.5
Test nozzle holder
assembly : 0 681 343 009
Opening pressure
bar : 173.5
Tolerance bar : ± 1.5
Test lines : 1 680 750 014
Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0
Prestroke mm : 2.55
Tolerance mm : ± 0.05
Check
tolerance mm : ± 0.10
Rack travel in mm : 10.50
Tolerance mm : ± 1.50
Firing order : 1- 3- 4- 2
Phasing : 0-90-180-270
Tolerance : ± 0.50
Check
tolerance °NW : ± 0.75

BASIC SETTING

Rated speed rpm : 980
Rack travel in mm : 11.60
Tolerance mm : ± 0.05
Del. quantity
cm³/1000 strokes : 78.5
Tolerance
cm³/1000 strokes : ± 0.5
Check tolerance
cm³/1000s. : ± 2.5
Speed
Tolerance
cm³/1000 strokes : 3.0

Check tolerance
 cm³/1000S. : 7.0
 Rated speed rpm : 475
 Rack travel in mm : 7.20
 Tolerance mm : +- 0.10
 Del. quantity
 cm³/1000 strokes : 14.0
 Tolerance
 cm³/1000 strokes : +- 2.0
 Check tolerance
 cm³/1000S. : +- 4.0
 Spreed
 Tolerance
 cm³/1000 strokes : 4.5
 Check tolerance
 cm³/1000S. : 7.0

(B) SETTING OF INJECTION PUMP
 WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800
 Rack travel in mm : 0.50
 Tolerance mm : +- 0.20
 governor spring
 pre-tension
 click setting x : 4.75

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 980
 Aneroid pressure
 hPa : 1000
 Del. quantity
 cm³/1000 strokes : 78.5
 Tolerance
 cm³/1000 strokes : +- 0.5
 Check tolerance
 cm³/1000S. : +- 2.5
 Spreed
 Tolerance
 cm³/1000 strokes : 3.0
 Check tolerance
 cm³/1000S. : 7.0

CONTROL LEVER

control lever
 position degree : 101.0

tolerance degree : +- 4.0

RATED SPEED

rack travel mm : 10.60
 Rated speed rpm : 1025
 Tolerance 1/min : +- 5

rack travel mm : 4.00
 Rated speed rpm : 1085
 Tolerance 1/min : +- 15

rack travel mm : 0.85
 Tolerance mm : +- 0.55
 Rated speed rpm : 1250

rack travel mm : 4.00
 Rated speed rpm : 1100

LOW IDLE

control lever
 position degree : 77.0
 tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 475
 rack travel mm : 6.70

Testing:

Rated speed rpm : 475
 rack travel mm : 7.20
 Tolerance mm : +- 0.10

rack travel mm : 2.00
 Rated speed rpm : 590

TORQUE CONTROL

Rated speed rpm : 980
 rack travel mm : 11.60
 Tolerance mm : +- 0.05

Rated speed rpm : 500
 rack travel mm : 12.15
 Tolerance mm : +- 0.05

Rated speed rpm : 700
 rack travel mm : 12.10
 Tolerance mm : +- 0.05

Rated speed rpm : 825
 rack travel mm : 11.80
 Tolerance mm : +- 0.10

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1000
rack travel mm : 12.15
Tolerance mm : ± 0.05

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 500
rack travel mm : 11.00
Tolerance mm : ± 0.05

Rated speed rpm : 500

Pressure hPa : 310
rack travel mm : 11.30
Tolerance mm : ± 0.10

Pressure hPa : 400
rack travel mm : 11.60
Tolerance mm : ± 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 1000
Rated speed rpm : 700
Del. quantity
cm³/1000 strokes : 79.0
Tolerance
cm³/1000 strokes : ± 1.5
Check tolerance
cm³/1000S. : ± 3.5

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 59.0
Tolerance
cm³/1000 strokes : ± 0.5
Check tolerance
cm³/1000S. : ± 2.5

BREAKAWAY

Rack travel in mm : 10.60

Rated speed rpm : 1025
Tolerance 1/min : ± 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 17.80
Tolerance mm : ± 0.20
Del. quantity
cm³/1000 strokes : 125.0
Tolerance
cm³/1000 strokes : ± 7.5
Check tolerance
cm³/1000S. : ± 10.0

LOW IDLE

Rated speed rpm : 475
rack travel mm : 7.20
Tolerance mm : ± 0.10
Del. quantity
cm³/1000 strokes : 14.0
Tolerance
cm³/1000 strokes : ± 2.0
Check tolerance
cm³/1000S. : ± 4.0
Speed
Tolerance
cm³/1000 strokes : 4.5
Check tolerance
cm³/1000S. : 7.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 30.05.95
Test oil : ISO 4113
Combination No. : 0 400 864 089
Injection pump
Pump designation : PES4A85D410/3RS2799
EP type number : 0 410 884 944
Governor
Governor design. : RSV325...1075A8C2253
: -3L
Governor no. : 0 420 232 547
Cust. part No. :

Customer-spec. information

Customer : KHD
Motor : BF4L913
Power KW : 70.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0
Overflow valve : 1 417 413 000
Inlet press. bar : 1.5
Test nozzle holder
assembly : 0 681 343 009
Opening pressure
bar : 173.5
Tolerance bar : ± 1.5
Test lines : 1 680 750 014
Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0
Firing order : 1- 3- 4- 2
Phasing : 0-90-180-270
Tolerance : ± 0.50
Check
tolerance °NW : ± 0.75

BASIC SETTING

Rated speed rpm : 1075
Rack travel in mm : 11.95
Tolerance mm : ± 0.05
Del. quantity
cm³/1000 strokes : 80.0
Tolerance
cm³/1000 strokes : ± 0.5
Check tolerance
cm³/1000s. : ± 2.5
Speed
Tolerance
cm³/1000 strokes : 3.0
Check tolerance
cm³/1000s. : 5.0
Rated speed rpm : 325
Rack travel in mm : 8.30
Tolerance mm : ± 0.20
Del. quantity
cm³/1000 strokes : 15.0

Tolerance
cm³/1000 strokes : + 3.0
Check tolerance
cm³/1000S. : + 5.0
Spreed
Tolerance
cm³/1000 strokes : 2.5
Check tolerance
cm³/1000S. : 4.5

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800
Rack travel in mm : 0.50
Tolerance mm : + 0.20
governor spring
pre-tension
click setting x : 4.00

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1075
Aneroid pressure
hPa : 1000
Del. quantity
cm³/1000 strokes : 80.0
Tolerance
cm³/1000 strokes : + 0.5
Check tolerance
cm³/1000S. : + 2.5
Spreed
Tolerance
cm³/1000 strokes : 3.0
Check tolerance
cm³/1000S. : 5.0

CONTROL LEVER

control lever
position degree : 99.0
tolerance degree : + 4.0

RATED SPEED

rack travel mm : 10.90
Rated speed rpm : 1120
Tolerance 1/min : + 5
rack travel mm : 4.00

Rated speed rpm : 1165
Tolerance 1/min : + 15
rack travel mm : 1.00
Tolerance mm : + 0.70
Rated speed rpm : 1315

LOW IDLE

control lever
position degree : 68.0
tolerance degree : + 4.0

Testing:

Rated speed rpm : 325
rack travel mm : 8.30
Tolerance mm : + 0.10
rack travel mm : 2.00
Rated speed rpm : 380
Tolerance 1/min : + 30
Rated speed rpm : 100
CRT mm min. : > 19.50

SET IDLE AUXILIARY SPRING

Rated speed rpm : 100

TORQUE CONTROL

Rated speed rpm : 1075
rack travel mm : 11.95
Tolerance mm : + 0.05
Rated speed rpm : 500
rack travel mm : 12.45
Tolerance mm : + 0.05
Rated speed rpm : 860
rack travel mm : 12.30
Tolerance mm : + 0.10

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1000
rack travel mm : 12.45
Tolerance mm : + 0.05

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 500
rack travel mm : 11.45
Tolerance mm : + 0.05

Rated speed rpm : 500

Pressure hPa : 250
rack travel mm : 11.80
Tolerance mm : + 0.10

Pressure hPa : 330
rack travel mm : 12.05
Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 1000
Rated speed rpm : 750
Del. quantity
cm3/1000 strokes : 80.5
Tolerance
cm3/1000 strokes : + 1.0
Check tolerance
cm3/1000S. : + 3.5

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm3/1000 strokes : 58.0
Tolerance
cm3/1000 strokes : + 1.0
Check tolerance
cm3/1000S. : + 3.0

BREAKAWAY

Rack travel in mm : 10.90
Rated speed rpm : 1120
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 18.20
Tolerance mm : + 0.20
Del. quantity
cm3/1000 strokes : 120.0

Tolerance
cm3/1000 strokes : + 5.0
Check tolerance
cm3/1000S. : + 8.0

LOW IDLE

Rated speed rpm : 325
rack travel mm : 8.30
Tolerance mm : + 0.20
Del. quantity
cm3/1000 strokes : 15.0
Tolerance
cm3/1000 strokes : + 3.0
Check tolerance
cm3/1000S. : + 5.0
Speed
Tolerance
cm3/1000 strokes : 2.5
Check tolerance
cm3/1000S. : 4.5

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 17.06.95
Test oil : ISO 4113
Combination No. : 0 400 865 017
Injection pump
Pump designation : PES5A80D410/3RS2526
EP type number : 0 410 885 004
Governor
Governor design. : RSV325...1400A8C540L
Governor no. : 0 420 232 311

Cust. part No. :

Customer-spec. information
Customer : KHD
Motor : F5L912
Power KW : 62.5

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet temp. °C : 40
Tolerance °C : + 2.0
Overflow valve : 1 417 413 000
Inlet press. bar : 1.0
Test nozzle holder assembly : 0 681 343 009
Opening pressure bar : 173.5
Tolerance bar : + 1.5
Test lines : 1 680 750 014
Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : + 1.0
Firing order : 1- 3- 5- 4- 2
Phasing : 0-72-144-216-288
Tolerance : + 0.50
Check tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1380
Rack travel in mm : 11.55
Tolerance mm : + 0.05
Del. quantity cm³/1000 strokes : 65.5
Tolerance cm³/1000 strokes : + 0.5
Check tolerance cm³/1000S. : + 2.0
Speed Tolerance cm³/1000 strokes : 2.0
Check tolerance cm³/1000S. : 3.5
Rated speed rpm : 325
Rack travel in mm : 8.10
Tolerance mm : + 0.10
Del. quantity cm³/1000 strokes : 9.0

Tolerance
cm³/1000 strokes : + 3.0
Check tolerance
cm³/1000S. : + 4.5
Spreed
Tolerance
cm³/1000 strokes : 2.0
Check tolerance
cm³/1000S. : 3.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800

Rack travel in mm : 0.65
Tolerance mm : + 0.35

governor spring
pre-tension
click setting x : 5.50

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1380
Aneroid pressure
hPa : -
Del. quantity
cm³/1000 strokes : 65.5
Tolerance
cm³/1000 strokes : + 0.5
Check tolerance
cm³/1000S. : + 2.0
Spreed
Tolerance
cm³/1000 strokes : 2.0
Check tolerance
cm³/1000S. : 3.5

CONTROL LEVER

control lever
position degree : 116.0
tolerance degree : + 4.0

RATED SPEED

rack travel mm : 10.50
Rated speed rpm : 1425
Tolerance 1/min : + 5

rack travel mm : 4.00

Rated speed rpm : 1470
Tolerance 1/min : + 15

rack travel mm : 1.00
Tolerance mm : + 0.70
Rated speed rpm : 1650

rack travel mm : 4.00
Rated speed rpm : 1520

LOW IDLE

control lever
position degree : 69.0
tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 325
rack travel mm : 8.10

Testing:

Rated speed rpm : 325
rack travel mm : 7.60
Tolerance mm : + 0.10

rack travel mm : 2.00
Rated speed rpm : 655
Tolerance 1/min : + 30

TORQUE CONTROL

Rated speed rpm : 1380
rack travel mm : 11.55
Tolerance mm : + 0.05

Rated speed rpm : 500
rack travel mm : 12.75
Tolerance mm : + 0.05

Rated speed rpm : 900
rack travel mm : 12.25
Tolerance mm : + 0.15

BREAKAWAY

Rack travel in mm : 10.50
Rated speed rpm : 1425
Tolerance 1/min : + 5

LOW IDLE

Rated speed rpm : 325
rack travel mm : 8.10
Tolerance mm : ± 0.10
Del. quantity
cm³/1000 strokes : 9.0
Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 4.5
Spreed
Tolerance
cm³/1000 strokes : 2.0
Check tolerance
cm³/1000S. : 3.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 31.10.84
Test oil : ISO 4113
Combination No. : 0 400 866 078
Injection pump
Pump designation : PES6A85D410/3RS2415
EP type number : 0 410 886 915
Governor
Governor design. : RSV325...900A7C720L
Governor no. : 0 420 232 339

Cust. part No. :

Customer-spec. information
Customer : KHD
Motor : BF6L913

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0
Overflow valve : 1 417 413 000
Inlet press. bar : 1.0
Test nozzle holde
assembly : 0 681 343 009
Opening pressure
bar : 173.5
Tolerance bar : ± 1.5
Test lines : 1 680 750 014
Outside diameter : 6.0
x inside diameter : 2.0

x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0
Firing order : 1- 5- 3- 6- 2-
: 4
Phasing : 0-60-120-180-240
: -300
Tolerance : ± 0.50
Check
tolerance °NW : ± 0.75

BASIC SETTING

Rated speed rpm : 900
Rack travel in mm : 11.85
Tolerance mm : ± 0.05
Del. quantity
cm³/1000 strokes : 68.5
Tolerance
cm³/1000 strokes : ± 0.5
Check tolerance
cm³/1000S. : ± 2.5
Speed
Tolerance
cm³/1000 strokes : 3.0
Check tolerance
cm³/1000S. : 4.5
Rated speed rpm : 325
Rack travel in mm : 8.10
Tolerance mm : ± 0.20
Del. quantity
cm³/1000 strokes : 12.0

Tolerance
cm³/1000 strokes : + 3.0
Check tolerance
cm³/1000S. : + 5.0
Spreed
Tolerance
cm³/1000 strokes : 2.0
Check tolerance
cm³/1000S. : 4.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 900
Aneroid pressure
hPa : -
Del. quantity
cm³/1000 strokes : 68.5
Tolerance
cm³/1000 strokes : + 0.5
Check tolerance
cm³/1000S. : + 2.5
Spreed
Tolerance
cm³/1000 strokes : 3.0
Check tolerance
cm³/1000S. : 4.5

RATED SPEED

rack travel mm : 10.80
Rated speed rpm : 945
Tolerance 1/min : + 5

rack travel mm : 0.85
Tolerance mm : + 0.55
Rated speed rpm : 1100

rack travel mm : 4.00
Rated speed rpm : 995

LOW IDLE

Setting point w/out bumper spring

Rated speed rpm : 325
rack travel mm : 7.60

Testing:

Rated speed rpm : 325
rack travel mm : 8.10

B27

Tolerance mm : + 0.10

TORQUE CONTROL

Rated speed rpm : 900
rack travel mm : 11.85
Tolerance mm : + 0.05

Rated speed rpm : 600
rack travel mm : 12.35
Tolerance mm : + 0.05

Rated speed rpm : 800
rack travel mm : 12.15
Tolerance mm : + 0.15

BREAKAWAY

Rack travel in mm : 10.80
Rated speed rpm : 945
Tolerance 1/min : + 5

LOW IDLE

Rated speed rpm : 325
rack travel mm : 8.10
Tolerance mm : + 0.20
Del. quantity
cm³/1000 strokes : 12.0
Tolerance
cm³/1000 strokes : + 3.0
Check tolerance
cm³/1000S. : + 5.0
Spreed
Tolerance
cm³/1000 strokes : 2.0
Check tolerance
cm³/1000S. : 4.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 29.05.95
Test oil : ISO 4113
Combination No. : 0 400 866 080
Injection pump
Pump designation : PES6A85D410/3RS2415
EP type number : 0 410 886 915
Governor
Governor design. : RSV325...1400A8C707
 : -4L
Governor no. : 0 420 232 461
Cust. part No. :

Customer-spec. information
Customer : KHD
Motor : BF6L913

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet
temp. °C : 40
Tolerance °C : + 2.0
Overflow valve : 1 417 413 000
Inlet press. bar : 1.0
Test nozzle holder
assembly : 0 681 343 009
Opening pressure
bar : 173.5
Tolerance bar : + 1.5
Test lines : 1 680 750 014
Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : + 1.0
Firing order : 1- 5- 3- 6- 2-
 : 4
Phasing : 0-60-120-180-240
 : -300
Tolerance : + 0.50
Check
tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1400
Rack travel in mm : 10.85
Tolerance mm : + 0.05
Del. quantity
cm3/1000 strokes : 76.5
Tolerance
cm3/1000 strokes : + 0.5
Check tolerance
cm3/1000S. : + 2.5
Speed
Tolerance
cm3/1000 strokes : 3.0
Check tolerance
cm3/1000S. : 4.5
Rated speed rpm : 325
Rack travel in mm : 8.00
Tolerance mm : + 0.20

Del. quantity
 cm³/1000 strokes : 12.5
 Tolerance
 cm³/1000 strokes : ± 3.0
 Check tolerance
 cm³/1000S. : ± 5.0
 Spreed
 Tolerance
 cm³/1000 strokes : 2.0
 Check tolerance
 cm³/1000S. : 4.0

(B) SETTING OF INJECTION PUMP
 WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800
 Rack travel in mm : 0.50
 Tolerance mm : ± 0.20
 governor spring
 pre-tension
 click setting x : 5.25

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1400
 Aneroid pressure
 hPa : 700
 Del. quantity
 cm³/1000 strokes : 76.5
 Tolerance
 cm³/1000 strokes : ± 0.5
 Check tolerance
 cm³/1000S. : ± 2.5
 Spreed
 Tolerance
 cm³/1000 strokes : 3.0
 Check tolerance
 cm³/1000S. : 4.5

CONTROL LEVER

control lever
 position degree : 119.0
 tolerance degree : ± 4.0

RATED SPEED

rack travel mm : 9.80
 Rated speed rpm : 1445
 Tolerance 1/min : ± 5

C01

rack travel mm : 4.00
 Rated speed rpm : 1485
 Tolerance 1/min : ± 15

rack travel mm : 0.85
 Tolerance mm : ± 0.55
 Rated speed rpm : 1600

rack travel mm : 4.00
 Rated speed rpm : 1520

LOW IDLE

control lever
 position degree : 68.0
 tolerance degree : ± 4.0

Setting point w/out bumper spring

Rated speed rpm : 325
 rack travel mm : 7.50

Testing:

Rated speed rpm : 325
 rack travel mm : 8.00
 Tolerance mm : ± 0.10

rack travel mm : 2.00
 Rated speed rpm : 630
 Tolerance 1/min : ± 30

Rated speed rpm : 100

CRT mm min. : > 19.50

TORQUE CONTROL

Dimension a mm : 1.20
 Rated speed rpm : 1400
 rack travel mm : 10.85
 Tolerance mm : ± 0.05

Rated speed rpm : 500
 rack travel mm : 12.05
 Tolerance mm : ± 0.05

Rated speed rpm : 1040
 rack travel mm : 11.50
 Tolerance mm : ± 0.10

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 700
rack travel mm : 12.05
Tolerance mm : +- 0.05

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 500
rack travel mm : 10.25
Tolerance mm : +- 0.05

Rated speed rpm : 500

Pressure hPa : 95
rack travel mm : 10.70
Tolerance mm : +- 0.10

Pressure hPa : 360
rack travel mm : 11.75
Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 45.5
Tolerance
cm³/1000 strokes : +- 1.5
Check tolerance
cm³/1000S. : +- 3.5

BREAKAWAY

Rack travel in mm : 9.80
Rated speed rpm : 1445
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 17.20
Tolerance mm : +- 0.10

CO2

Del. quantity
cm³/1000 strokes : 110.0
Tolerance
cm³/1000 strokes : +- 5.0
Check tolerance
cm³/1000S. : +- 8.0

LOW IDLE

Rated speed rpm : 325
rack travel mm : 8.00
Tolerance mm : +- 0.20
Del. quantity
cm³/1000 strokes : 12.5
Tolerance
cm³/1000 strokes : +- 3.0
Check tolerance
cm³/1000S. : +- 5.0
Speed
Tolerance
cm³/1000 strokes : 2.0
Check tolerance
cm³/1000S. : 4.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 23.08.95
Test oil : ISO 4113
Combination No. : 0 400 866 152
Injection pump
Pump designation : PES6A85D410/3RS2783
EP type number : 0 410 886 893
Governor
Governor design. : RSV325...1250A5C2239
: L
Governor no. : 0 420 232 526
Cust. part No. :

Customer-spec. information

Customer : KHD
Motor : F6L912F
Power KW : 82.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0
Overflow valve : 1 417 413 000
Inlet press. bar : 1.5
Test nozzle holder
assembly : 0 681 343 009
Opening pressure
bar : 173.5
Tolerance bar : ± 1.5
Test lines : 1 680 750 014
Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0
Firing order : 1- 5- 3- 6- 2-
: 4
Phasing : 0-60-120-180-240
: -300
Tolerance : ± 0.50
Check
tolerance °NW : ± 0.75

BASIC SETTING

Rated speed rpm : 1235
Rack travel in mm : 11.85
Tolerance mm : ± 0.05
Del. quantity
cm³/1000 strokes : 70.0
Tolerance
cm³/1000 strokes : ± 0.5
Check tolerance
cm³/1000S. : ± 2.5
Speed
Tolerance
cm³/1000 strokes : 3.0
Check tolerance
cm³/1000S. : 5.0
Rated speed rpm : 325
Rack travel in mm : 6.00
Tolerance mm : ± 0.20

Del. quantity
 cm³/1000 strokes : 11.0
 Tolerance
 cm³/1000 strokes : ± 3.0
 Check tolerance
 cm³/1000S. : ± 5.0
 Spreed
 Tolerance
 cm³/1000 strokes : 2.5
 Check tolerance
 cm³/1000S. : 4.5

(B) SETTING OF INJECTION PUMP
 WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800
 Rack travel in mm : 0.50
 Tolerance mm : ± 0.20
 governor spring
 pre-tension
 click setting x : 4.50

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1235
 Aneroid pressure
 hPa : -
 Del. quantity
 cm³/1000 strokes : 70.0
 Tolerance
 cm³/1000 strokes : ± 0.5
 Check tolerance
 cm³/1000S. : ± 2.5
 Spreed
 Tolerance
 cm³/1000 strokes : 3.0
 Check tolerance
 cm³/1000S. : 5.0

CONTROL LEVER

control lever
 position degree : 107.0
 tolerance degree : ± 4.0

RATED SPEED

rack travel mm : 10.80
 Rated speed rpm : 1280
 Tolerance 1/min : ± 5

rack travel mm : 4.00
 Rated speed rpm : 1345
 Tolerance 1/min : ± 15

rack travel mm : 0.85
 Tolerance mm : ± 0.55
 Rated speed rpm : 1510

rack travel mm : 4.00
 Rated speed rpm : 1360

LOW IDLE

control lever
 position degree : 73.0
 tolerance degree : ± 4.0

Setting point w/out bumper spring

Rated speed rpm : 325
 rack travel mm : 6.00

Testing:

Rated speed rpm : 325
 rack travel mm : 5.50
 Tolerance mm : ± 0.10

rack travel mm : 2.00
 Rated speed rpm : 450
 Tolerance 1/min : ± 30

Rated speed rpm : 100

CRT mm min. : > 19.50

TORQUE CONTROL

Rated speed rpm : 1235
 rack travel mm : 11.85
 Tolerance mm : ± 0.05

Rated speed rpm : 750
 rack travel mm : 11.90
 Tolerance mm : ± 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
 hPa : -
 Rated speed rpm : 750

Del. quantity
cm³/1000 strokes : 56.5
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 3.5

Aneroid pressure
hPa : -
Rated speed rpm : 1000
Del. quantity
cm³/1000 strokes : 65.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 3.5

BREAKAWAY

Rack travel in mm : 10.80
Rated speed rpm : 1280
Tolerance 1/min : ± 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.25
Tolerance mm : ± 0.75
Del. quantity
cm³/1000 strokes : 110.0
Tolerance
cm³/1000 strokes : ± 5.0
Check tolerance
cm³/1000S. : ± 8.0

LOW IDLE

Rated speed rpm : 325
rack travel mm : 6.00
Tolerance mm : ± 0.20
Del. quantity
cm³/1000 strokes : 11.0
Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 5.0
Spreed
Tolerance
cm³/1000 strokes : 2.5
Check tolerance
cm³/1000S. : 4.5

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 28.08.95
Test oil : ISO 4113
Combination No. : 0 400 866 169
Injection pump
Pump designation : PES6A85D410/3RS2611
EP type number : 0 410 886 902
Governor
Governor design. : RSV325...1250A2C540
 : -3L
Governor no. : 0 420 232 565

Cust. part No. :

Customer-spec. information
Customer : KHD
Motor : F6L913
Power KW : 89.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet
temp. °C : 40
Tolerance °C : +- 2.0
Overflow valve : 1 417 413 000
Inlet press. bar : 1.5
Test nozzle holder
assembly : 0 681 343 009
Opening pressure
bar : 173.5
Tolerance bar : +- 1.5
Test lines : 1 680 750 014
Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : +- 1.0
Firing order : 1- 5- 3- 6- 2-
 : 4
Phasing : 0-60-120-180-240
 : -300
Tolerance : +- 0.50
Check
tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1250
Rack travel in mm : 10.55
Tolerance mm : +- 0.05
Del. quantity
cm³/1000 strokes : 63.0
Tolerance
cm³/1000 strokes : +- 0.5
Check tolerance
cm³/1000S. : +- 2.5
Speed
Tolerance
cm³/1000 strokes : 3.0
Check tolerance
cm³/1000S. : 5.0
Rated speed rpm : 325
Rack travel in mm : 7.00
Tolerance mm : +- 0.20

Del. quantity
cm³/1000 strokes : 15.0
Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 5.0
Spread
Tolerance
cm³/1000 strokes : 2.5
Check tolerance
cm³/1000S. : 4.5

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800
Rack travel in mm : 0.50
Tolerance mm : ± 0.20
governor spring
pre-tension
click setting x : 5.50

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1250
Aneroid pressure
hPa : -
Del. quantity
cm³/1000 strokes : 63.0
Tolerance
cm³/1000 strokes : ± 0.5
Check tolerance
cm³/1000S. : ± 2.5
Spread
Tolerance
cm³/1000 strokes : 3.0
Check tolerance
cm³/1000S. : 5.0

CONTROL LEVER

control lever
position degree : 102.0
tolerance degree : ± 4.0

RATED SPEED

rack travel mm : 9.50
Rated speed rpm : 1295
Tolerance 1/min : ± 5

rack travel mm : 4.00
Rated speed rpm : 1365
Tolerance 1/min : ± 15

rack travel mm : 0.85
Tolerance mm : ± 0.55
Rated speed rpm : 1525

LOW IDLE

control lever
position degree : 74.0
tolerance degree : ± 4.0

Testing:

Rated speed rpm : 325
rack travel mm : 7.00
Tolerance mm : ± 0.10

rack travel mm : 2.00
Rated speed rpm : 440
Tolerance 1/min : ± 30

Rated speed rpm : 100

CRT mm min. : > 19.50

SET IDLE AUXILIARY SPRING

Rated speed rpm : 100

TORQUE CONTROL

Rated speed rpm : 1250
rack travel mm : 10.55
Tolerance mm : ± 0.05

Rated speed rpm : 500
rack travel mm : 11.15
Tolerance mm : ± 0.05

Rated speed rpm : 1000
rack travel mm : 10.80
Tolerance mm : ± 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : -
Rated speed rpm : 800

Del. quantity
cm³/1000 strokes : 55.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 3.5
Spread
Tolerance
cm³/1000 strokes : 2.5
Check tolerance
cm³/1000S. : 4.5

BREAKAWAY

Rack travel in mm : 9.50
Rated speed rpm : 1295
Tolerance 1/min : ± 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 17.80
Tolerance mm : ± 0.20
Del. quantity
cm³/1000 strokes : 120.0
Tolerance
cm³/1000 strokes : ± 5.0
Check tolerance
cm³/1000S. : ± 8.0

LOW IDLE

Rated speed rpm : 325
rack travel mm : 7.00
Tolerance mm : ± 0.20
Del. quantity
cm³/1000 strokes : 15.0
Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 5.0
Spread
Tolerance
cm³/1000 strokes : 2.5
Check tolerance
cm³/1000S. : 4.5

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 30.05.95
Test oil : ISO 4113
Combination No. : 0 400 866 173
Injection pump
Pump designation : PES6A85D410/3RS2611
EP type number : 0 410 886 902
Governor
Governor design. : RSV325...1200A0C2148
: -1L
Governor no. : 0 420 232 567
Cust. part No. :

Customer-spec. information
Customer : KHD
Motor : F6L913 H
Power kW : 85.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0
Overflow valve : 1 419 992 198
Inlet press. bar : 1.5
Test nozzle holder
assembly : 0 681 343 009
Opening pressure
bar : 173.5
Tolerance bar : ± 1.5
Test lines : 1 680 750 014
Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0
Firing order : 1- 5- 3- 6- 2-
: 4
Phasing : 0-60-120-180-240
: -300
Tolerance : ± 0.50
Check
tolerance °NW : ± 0.75

BASIC SETTING

Rated speed rpm : 1200
Rack travel in mm : 10.45
Tolerance mm : ± 0.05
Del. quantity
cm³/1000 strokes : 62.0
Tolerance
cm³/1000 strokes : ± 0.5
Check tolerance
cm³/1000S. : ± 2.5
Speed
Tolerance
cm³/1000 strokes : 3.0
Check tolerance
cm³/1000S. : 5.0
Rated speed rpm : 325
Rack travel in mm : 8.50
Tolerance mm : ± 0.20

Del. quantity
cm³/1000 strokes : 11.0
Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 5.0
Spreed
Tolerance
cm³/1000 strokes : 2.5
Check tolerance
cm³/1000S. : 4.5

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800
Rack travel in mm : 0.50
Tolerance mm : ± 0.20
governor spring
pre-tension
click setting x : 4.00

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1200
Aneroid pressure
hPa : -
Del. quantity
cm³/1000 strokes : 62.0
Tolerance
cm³/1000 strokes : ± 0.5
Check tolerance
cm³/1000S. : ± 2.5
Spreed
Tolerance
cm³/1000 strokes : 3.0
Check tolerance
cm³/1000S. : 5.0

CONTROL LEVER

control lever
position degree : 104.0
tolerance degree : ± 4.0

RATED SPEED

rack travel mm : 9.40
Rated speed rpm : 1245
Tolerance 1/min : ± 5

rack travel mm : 4.00
Rated speed rpm : 1310
Tolerance 1/min : ± 15

rack travel mm : 0.85
Tolerance mm : ± 0.55
Rated speed rpm : 1460

LOW IDLE

control lever
position degree : 76.0
tolerance degree : ± 4.0

Testing:

Rated speed rpm : 325
rack travel mm : 8.50
Tolerance mm : ± 0.10

rack travel mm : 2.00
Rated speed rpm : 470
Tolerance 1/min : ± 30

SET IDLE AUXILIARY SPRING

Rated speed rpm : 30

TORQUE CONTROL

Rated speed rpm : 1200
rack travel mm : 10.45
Tolerance mm : ± 0.05

Rated speed rpm : 500
rack travel mm : 11.10
Tolerance mm : ± 0.10

Rated speed rpm : 800
rack travel mm : 11.10
Tolerance mm : ± 0.10

Rated speed rpm : 1050
rack travel mm : 10.80
Tolerance mm : ± 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : -
Rated speed rpm : 800

Del. quantity
cm³/1000 strokes : 55.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 3.5

Aneroid pressure
hPa : -
Rated speed rpm : 1050
Del. quantity
cm³/1000 strokes : 60.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 3.5

BREAKAWAY

Rack travel in mm : 9.40
Rated speed rpm : 1245
Tolerance 1/min : ± 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 17.80
Tolerance mm : ± 0.20
Del. quantity
cm³/1000 strokes : 120.0
Tolerance
cm³/1000 strokes : ± 5.0
Check tolerance
cm³/1000S. : ± 8.0

LOW IDLE

Rated speed rpm : 325
rack travel mm : 8.50
Tolerance mm : ± 0.20
Del. quantity
cm³/1000 strokes : 11.0
Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 5.0
Speed
Tolerance
cm³/1000 strokes : 2.5
Check tolerance
cm³/1000S. : 4.5

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 04.05.95
Test oil : ISO 4113

Combination No. : 0 400 874 253

Injection pump
Pump designation : PES4A85D410/3RS2799
: -2
EP type number : 0 410 884 941

Governor
Governor design. : RSV325...1150A8C2239
: -6L
Governor no. : 0 420 232 582

Cust. part No. :

Customer-spec. information
Customer : KHD
Motor : BF4L913
Power KW : 70.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde
assembly : 0 681 343 009

Opening pressure
bar : 173.5
Tolerance bar : ± 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0
x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0

Firing order : 1- 3- 4- 2

Phasing : 0-90-180-270
Tolerance : ± 0.50
Check
tolerance °NW : ± 0.75

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 11.55
Tolerance mm : ± 0.05

Del. quantity
cm³/1000 strokes : 80.0

Tolerance
cm³/1000 strokes : ± 0.5

Check tolerance
cm³/1000S. : ± 2.5

Spreed
Tolerance
cm³/1000 strokes : 3.0

Check tolerance
cm³/1000S. : 5.0

Rated speed rpm : 325

Rack travel in mm : 7.60
Tolerance mm : ± 0.10
Del. quantity
cm³/1000 strokes : 15.0

Tolerance
cm³/1000 strokes : +- 3.0
Check tolerance
cm³/1000S. : +- 5.0
Spreed
Tolerance
cm³/1000 strokes : 2.5
Check tolerance
cm³/1000S. : 4.5

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800
Rack travel in mm : 0.50
Tolerance mm : +- 0.20
governor spring
pre-tension
click setting x : 4.20

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1050
Aneroid pressure
hPa : -
Del. quantity
cm³/1000 strokes : 80.0
Tolerance
cm³/1000 strokes : +- 0.5
Check tolerance
cm³/1000S. : +- 2.5
Spreed
Tolerance
cm³/1000 strokes : 3.0
Check tolerance
cm³/1000S. : 5.0

CONTROL LEVER

control lever
position degree : 101.0
tolerance degree : +- 4.0

RATED SPEED

rack travel mm : 10.50
Rated speed rpm : 1095
Tolerance 1/min : +- 5
rack travel mm : 4.00

Rated speed rpm : 1135
Tolerance 1/min : +- 15
rack travel mm : 0.85
Tolerance mm : +- 0.55
Rated speed rpm : 1330
rack travel mm : 4.00
Rated speed rpm : 1160

LOW IDLE

control lever
position degree : 70.0
tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 325
rack travel mm : 7.10

Testing:

Rated speed rpm : 325
rack travel mm : 7.60
Tolerance mm : +- 0.10

rack travel mm : 2.00
Rated speed rpm : 465
Tolerance 1/min : +- 30

Rated speed rpm : 100

CRJ mm min. : > 19.50

TORQUE CONTROL

Rated speed rpm : 1050
rack travel mm : 11.55
Tolerance mm : +- 0.05

Rated speed rpm : 730
rack travel mm : 12.15
Tolerance mm : +- 0.05

Rated speed rpm : 885
rack travel mm : 11.80
Tolerance mm : +- 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : -
Rated speed rpm : 730
Del. quantity
cm³/1000 strokes : 80.0
Tolerance
cm³/1000 strokes : +- 1.0
Check tolerance
cm³/1000S. : +- 3.5

BREAKAWAY

Rack travel in mm : 10.50
Rated speed rpm : 1095
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 17.80
Tolerance mm : +- 0.20
Del. quantity
cm³/1000 strokes : 125.0
Tolerance
cm³/1000 strokes : +- 5.0
Check tolerance
cm³/1000S. : +- 8.0

LOW IDLE

Rated speed rpm : 325
rack travel mm : 7.60
Tolerance mm : +- 0.10
Del. quantity
cm³/1000 strokes : 15.0
Tolerance
cm³/1000 strokes : +- 3.0
Check tolerance
cm³/1000S. : +- 5.0
Spreed
Tolerance
cm³/1000 strokes : 2.5
Check tolerance
cm³/1000S. : 4.5

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 29.05.95
Test oil : ISO 4113
Combination No. : 0 400 876 274
Injection pump
Pump designation : PES6A95D410RS2471
EP type number : 0 410 896 952
Governor
Governor design. : RSV325...1150A8C707
: -6L
Governor no. : 0 420 232 532

Cust. part No. :

Customer-spec. information
Customer : KHD
Motor : BF6L913C
Power KW : 132.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0
Overflow valve : 1 417 413 000
Inlet press. bar : 1.5
Test nozzle holder
assembly : 0 681 343 009
Opening pressure
bar : 173.5
Tolerance bar : ± 1.5
Test lines : 1 680 750 014
Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0
Firing order : 1- 5- 3- 6- 2-
: 4
Phasing : 0-60-120-180-240
: -300
Tolerance : ± 0.50
Check
tolerance °NW : ± 0.75

BASIC SETTING

Rated speed rpm : 1150
Rack travel in mm : 11.85
Tolerance mm : ± 0.05
Del. quantity
cm³/1000 strokes : 109.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 3.0
Speed
Tolerance
cm³/1000 strokes : 3.5
Check tolerance
cm³/1000S. : 6.0
Rated speed rpm : 325
Rack travel in mm : 7.30
Tolerance mm : ± 0.20

Del. quantity
 cm³/1000 strokes : 12.0
 Tolerance
 cm³/1000 strokes : + 3.0
 Check tolerance
 cm³/1000S. : + 5.5
 Spreed
 Tolerance
 cm³/1000 strokes : 3.5
 Check tolerance
 cm³/1000S. : 5.5

(B) SETTING OF INJECTION PUMP
 WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800
 Rack travel in mm : 0.50
 Tolerance mm : + 0.20

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1150
 Aneroid pressure
 hPa : 700
 Del. quantity
 cm³/1000 strokes : 109.0
 Tolerance
 cm³/1000 strokes : + 1.0
 Check tolerance
 cm³/1000S. : + 3.0
 Spreed
 Tolerance
 cm³/1000 strokes : 3.5
 Check tolerance
 cm³/1000S. : 6.0

CONTROL LEVER

control lever
 position degree : 106.0
 tolerance degree : + 4.0

RATED SPEED

rack travel mm : 10.80
 Rated speed rpm : 1195
 Tolerance 1/min : + 5
 rack travel mm : 4.00
 Rated speed rpm : 1250
 Tolerance 1/min : + 15

rack travel mm : 0.85
 Tolerance mm : + 0.55
 Rated speed rpm : 1400

rack travel mm : 4.00
 Rated speed rpm : 1300

LOW IDLE

control lever
 position degree : 71.0
 tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 325
 rack travel mm : 6.80

Testing:

Rated speed rpm : 325
 rack travel mm : 7.30
 Tolerance mm : + 0.10

rack travel mm : 2.00
 Rated speed rpm : 615
 Tolerance 1/min : + 30

Rated speed rpm : 100

CRT mm min. : > 19.50

TORQUE CONTROL

Rated speed rpm : 1150
 rack travel mm : 11.85
 Tolerance mm : + 0.05

Rated speed rpm : 500
 rack travel mm : 11.90
 Tolerance mm : + 0.10

ANEROID/ALTITUDE
 COMPENSATOR TEST

SETTING

Rated speed rpm : 500
 Pressure hPa : 700
 rack travel mm : 11.85
 Tolerance mm : + 0.05

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 500
rack travel mm : 9.95
Tolerance mm : ± 0.05

Rated speed rpm : 500

Pressure hPa : 93
rack travel mm : 10.20
Tolerance mm : ± 0.10

Pressure hPa : 373
rack travel mm : 11.55
Tolerance mm : ± 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 700
Rated speed rpm : 850
Del. quantity
cm³/1000 strokes : 105.0
Tolerance
cm³/1000 strokes : ± 1.5
Check tolerance
cm³/1000S. : ± 4.0
Spreed
Check tolerance
cm³/1000S. : 7.0

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 63.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 3.0

BREAKAWAY

Rack travel in mm : 10.80
Rated speed rpm : 1195
Tolerance 1/min : ± 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 15.70
Tolerance mm : ± 0.20

Del. quantity
cm³/1000 strokes : 125.0
Tolerance
cm³/1000 strokes : ± 5.0
Check tolerance
cm³/1000S. : ± 8.0

LOW IDLE

Rated speed rpm : 325
rack travel mm : 7.30
Tolerance mm : ± 0.20
Del. quantity
cm³/1000 strokes : 12.0
Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 5.5
Spreed
Tolerance
cm³/1000 strokes : 3.5
Check tolerance
cm³/1000S. : 5.5

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 14.06.95
Test oil : ISO 4113
Combination No. : 0 400 876 275
Injection pump
Pump designation : PES6A95D410RS2471
EP type number : 0 410 896 952
Governor
Governor design. : RSV325...1150A8C674
: -3L
Governor no. : 0 420 232 543

Cust. part No. :

Customer-spec. information

Customer : KHD
Motor : BF6L913C
Power KW : 132.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0
Overflow valve : 1 417 413 000
Inlet press. bar : 1.5
Test nozzle holder
assembly : 0 681 343 009
Opening pressure
bar : 173.5
Tolerance bar : ± 1.5
Test lines : 1 680 750 014
Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0
Firing order : 1- 5- 3- 6- 2-
: 4
Phasing : 0-60-120-180-240
: -300
Tolerance : ± 0.50
Check
tolerance °NW : ± 0.75

BASIC SETTING

Rated speed rpm : 1150
Rack travel in mm : 11.85
Tolerance mm : ± 0.05
Del. quantity
cm³/1000 strokes : 109.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 3.0
Speed
Tolerance
cm³/1000 strokes : 3.0
Check tolerance
cm³/1000S. : 6.0
Rated speed rpm : 325
Rack travel in mm : 7.30
Tolerance mm : ± 0.20

Del. quantity
cm³/1000 strokes : 19.0
Tolerance
cm³/1000 strokes : + 3.0
Check tolerance
cm³/1000S. : + 5.5
Spreed
Tolerance
cm³/1000 strokes : 3.0
Check tolerance
cm³/1000S. : 5.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800
Rack travel in mm : 0.50
Tolerance mm : + 0.20
governor spring
pre-tension
click setting x : 4.75

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1150
Aneroid pressure
hPa : 700
Del. quantity
cm³/1000 strokes : 109.0
Tolerance
cm³/1000 strokes : + 1.0
Check tolerance
cm³/1000S. : + 3.0
Spreed
Tolerance
cm³/1000 strokes : 3.0
Check tolerance
cm³/1000S. : 6.0

CONTROL LEVER

control lever
position degree : 106.0
tolerance degree : + 4.0

RATED SPEED

rack travel mm : 10.80
Rated speed rpm : 1195
Tolerance 1/min : + 5

rack travel mm : 4.00
Rated speed rpm : 1250
Tolerance 1/min : + 15

rack travel mm : 0.85
Tolerance mm : + 0.55
Rated speed rpm : 1400

rack travel mm : 4.00
Rated speed rpm : 1300

LOW IDLE

control lever
position degree : 71.0
tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 325
rack travel mm : 7.30

Testing:

Rated speed rpm : 325
rack travel mm : 6.80
Tolerance mm : + 0.10

rack travel mm : 2.00
Rated speed rpm : 615
Tolerance 1/min : + 30

Rated speed rpm : 100

CRT mm min. : > 19.50

TORQUE CONTROL

Rated speed rpm : 1150
rack travel mm : 11.85
Tolerance mm : + 0.05

Rated speed rpm : 500
rack travel mm : 11.90
Tolerance mm : + 0.10

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 700

rack travel mm : 11.85
Tolerance mm : + 0.05

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 500
rack travel mm : 9.90
Tolerance mm : + 0.10

Rated speed rpm : 500

Pressure hPa : 160
rack travel mm : 10.55
Tolerance mm : + 0.15

Pressure hPa : 340
rack travel mm : 11.35
Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 700
Rated speed rpm : 850
Del. quantity
cm³/1000 strokes : 105.0
Tolerance
cm³/1000 strokes : + 1.5
Check tolerance
cm³/1000S. : + 4.0
Spreed
Check tolerance
cm³/1000S. : 7.0

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 63.0
Tolerance
cm³/1000 strokes : + 1.0
Check tolerance
cm³/1000S. : + 3.0

BREAKAWAY

Rack travel in mm : 10.80
Rated speed rpm : 1195
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 15.70
Tolerance mm : + 0.20
Del. quantity
cm³/1000 strokes : 125.0
Tolerance
cm³/1000 strokes : + 5.0
Check tolerance
cm³/1000S. : + 8.0

LOW IDLE

Rated speed rpm : 325
rack travel mm : 7.30
Tolerance mm : + 0.20
Del. quantity
cm³/1000 strokes : 19.0
Tolerance
cm³/1000 strokes : + 3.0
Check tolerance
cm³/1000S. : + 5.5
Spreed
Tolerance
cm³/1000 strokes : 3.0
Check tolerance
cm³/1000S. : 5.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 17.06.95
Test oil : ISO 4113
Combination No. : 0 400 876 330
Injection pump
Pump designation : PES6A95D410RS2471
EP type number : 0 410 896 952
Governor
Governor design. : RSV325...1400A2C2205
: L
Governor no. : 0 420 232 445
Cust. part No. :

Customer-spec. information
Customer : KHD
Motor : PPM BF6L913C
Power KW : 125.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet
temp. °C : 40
Tolerance °C : + 2.0
Overflow valve : 1 417 413 000
Inlet press. bar : 1.0
Test nozzle holder
assembly : 0 681 343 009
Opening pressure
bar : 173.5
Tolerance bar : + 1.5
Test lines : 1 680 750 014
Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : + 1.0
Firing order : 1- 5- 3- 6- 2-
: 4
Phasing : 0-60-120-180-240
: -300
Tolerance : + 0.50
Check
tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1400
Rack travel in mm : 10.95
Tolerance mm : + 0.05
Del. quantity
cm³/1000 strokes : 89.0
Tolerance
cm³/1000 strokes : + 1.0
Check tolerance
cm³/1000S. : + 3.0
Speed
Tolerance
cm³/1000 strokes : 3.5
Check tolerance
cm³/1000S. : 6.0
Rated speed rpm : 325
Rack travel in mm : 7.60
Tolerance mm : + 0.20

Del. quantity
 cm3/1000 strokes : 13.0
 Tolerance
 cm3/1000 strokes : +- 3.0
 Check tolerance
 cm3/1000S. : +- 5.5
 Spreed
 Tolerance
 cm3/1000 strokes : 3.5
 Check tolerance
 cm3/1000S. : 5.5

(B) SETTING OF INJECTION PUMP
 WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800
 Rack travel in mm : 0.50
 Tolerance mm : +- 0.20
 governor spring
 pre-tension
 click setting x : 4.00

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1400
 Aneroid pressure
 hPa : 700
 Del. quantity
 cm3/1000 strokes : 89.0
 Tolerance
 cm3/1000 strokes : +- 1.0
 Check tolerance
 cm3/1000S. : +- 3.0
 Spreed
 Tolerance
 cm3/1000 strokes : 3.5
 Check tolerance
 cm3/1000S. : 6.0

CONTROL LEVER

control lever
 position degree : 108.0
 tolerance degree : +- 4.0

RATED SPEED

rack travel mm : 9.90
 Rated speed rpm : 1445
 Tolerance 1/min : +- 5

rack travel mm : 4.00
 Rated speed rpm : 1505
 Tolerance 1/min : +- 15

rack travel mm : 0.85
 Tolerance mm : +- 0.55
 Rated speed rpm : 1675

rack travel mm : 4.00
 Rated speed rpm : 1560

LOW IDLE

control lever
 position degree : 72.0
 tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 325
 rack travel mm : 7.60

Testing:

Rated speed rpm : 325
 rack travel mm : 7.10
 Tolerance mm : +- 0.10

rack travel mm : 2.00
 Rated speed rpm : 655
 Tolerance 1/min : +- 30

Rated speed rpm : 100

CRT mm min. : > 19.50

TORQUE CONTROL

Rated speed rpm : 1400
 rack travel mm : 10.95
 Tolerance mm : +- 0.05

Rated speed rpm : 500
 rack travel mm : 11.00
 Tolerance mm : +- 0.10

ANEROID/ALTITUDE
 COMPENSATOR TEST

SETTING

Rated speed rpm : 650
 Pressure hPa : 700

rack travel mm : 11.00
Tolerance mm : +- 0.10

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 650
rack travel mm : 10.25
Tolerance mm : +- 0.05

Rated speed rpm : 650

Pressure hPa : 180
rack travel mm : 10.55
Tolerance mm : +- 0.05

Pressure hPa : 220
rack travel mm : 10.75
Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 700
Rated speed rpm : 850
Del. quantity
cm³/1000 strokes : 81.0
Tolerance
cm³/1000 strokes : +- 1.5
Check tolerance
cm³/1000S. : +- 4.0

Aneroid pressure
hPa : -
Rated speed rpm : 650
Del. quantity
cm³/1000 strokes : 65.0
Tolerance
cm³/1000 strokes : +- 1.0
Check tolerance
cm³/1000S. : +- 3.0

BREAKAWAY

Rack travel in mm : 9.90
Rated speed rpm : 1445
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 15.80
Tolerance mm : +- 0.20

Del. quantity
cm³/1000 strokes : 120.0
Tolerance
cm³/1000 strokes : +- 5.0
Check tolerance
cm³/1000S. : +- 8.0

LOW IDLE

Rated speed rpm : 325
rack travel mm : 7.60
Tolerance mm : +- 0.20
Del. quantity
cm³/1000 strokes : 13.0
Tolerance
cm³/1000 strokes : +- 3.0
Check tolerance
cm³/1000S. : +- 5.5
Spread
Tolerance
cm³/1000 strokes : 3.5
Check tolerance
cm³/1000S. : 5.5

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 17.06.95
Test oil : ISO 4113
Combination No. : 0 400 876 387
Injection pump
Pump designation : PES6A95D410RS2625
EP type number : 0 410 896 926
Governor
Governor design. : RSV375...1200A5C2253
 : -4L
Governor no. : 0 420 232 560

Cust. part No. :

Customer-spec. information

Customer : KHD
Motor : BF6L913C
Power kW : 125.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet
temp. °C : 40
Tolerance °C : + 2.0
Overflow valve : 1 417 413 000
Inlet press. bar : 1.5
Test nozzle holder
assembly : 0 681 343 009
Opening pressure
bar : 173.5
Tolerance bar : + 1.5
Test lines : 1 680 750 014
Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : + 1.0
Firing order : 1- 5- 3- 6- 2-
 : 4
Phasing : 0-60-120-180-240
 : -300
Tolerance : + 0.50
Check
tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1200
Rack travel in mm : 11.15
Tolerance mm : + 0.05
Del. quantity
cm³/1000 strokes : 86.0
Tolerance
cm³/1000 strokes : + 0.5
Check tolerance
cm³/1000S. : + 2.5
Speed
Tolerance
cm³/1000 strokes : 3.5
Check tolerance
cm³/1000S. : 6.0
Rated speed rpm : 375
Rack travel in mm : 6.00
Tolerance mm : + 0.20

Del. quantity
 cm³/1000 strokes : 14.0
 Tolerance
 cm³/1000 strokes : +- 3.0
 Check tolerance
 cm³/1000S. : +- 5.5
 Spreed
 Tolerance
 cm³/1000 strokes : 3.5
 Check tolerance
 cm³/1000S. : 5.0

(B) SETTING OF INJECTION PUMP
 WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800
 Rack travel in mm : 0.50
 Tolerance mm : +- 0.20
 governor spring
 pre-tension
 click setting x : 3.00

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1200
 Aneroid pressure
 hPa : 800
 Del. quantity
 cm³/1000 strokes : 86.0
 Tolerance
 cm³/1000 strokes : +- 0.5
 Check tolerance
 cm³/1000S. : +- 2.5
 Spreed
 Tolerance
 cm³/1000 strokes : 3.5
 Check tolerance
 cm³/1000S. : 6.0

CONTROL LEVER

control lever
 position degree : 98.0
 tolerance degree : +- 4.0

RATED SPEED

rack travel mm : 10.10
 Rated speed rpm : 1245
 Tolerance 1/min : +- 5

rack travel mm : 4.00
 Rated speed rpm : 1275
 Tolerance 1/min : +- 15

rack travel mm : 0.85
 Tolerance mm : +- 0.55
 Rated speed rpm : 1440

rack travel mm : 4.00
 Rated speed rpm : 1295

LOW IDLE

control lever
 position degree : 65.0
 tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 375
 rack travel mm : 6.00

Testing:

Rated speed rpm : 375
 rack travel mm : 5.55
 Tolerance mm : +- 0.15

rack travel mm : 2.00
 Rated speed rpm : 465
 Tolerance 1/min : +- 30

Rated speed rpm : 100

CRT mm min. : > 19.50

TORQUE CONTROL

Dimension a mm : 1.10
 Rated speed rpm : 1200
 rack travel mm : 11.15
 Tolerance mm : +- 0.05

Rated speed rpm : 500
 rack travel mm : 12.05
 Tolerance mm : +- 0.05

Rated speed rpm : 1030
 rack travel mm : 10.50
 Tolerance mm : +- 0.10

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 800
rack travel mm : 12.05
Tolerance mm : +- 0.05

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 500
rack travel mm : 10.55
Tolerance mm : +- 0.05

Rated speed rpm : 500

Pressure hPa : 280
rack travel mm : 11.25
Tolerance mm : +- 0.15

Pressure hPa : 350
rack travel mm : 11.75
Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 800
Rated speed rpm : 800
Del. quantity
cm³/1000 strokes : 90.0
Tolerance
cm³/1000 strokes : +- 1.0
Check tolerance
cm³/1000S. : +- 3.5

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 56.0
Tolerance
cm³/1000 strokes : +- 1.0
Check tolerance
cm³/1000S. : +- 3.0

BREAKAWAY

Rack travel in mm : 10.10

Rated speed rpm : 1245
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 16.50
Tolerance mm : +- 0.20
Del. quantity
cm³/1000 strokes : 125.0
Tolerance
cm³/1000 strokes : +- 5.0
Check tolerance
cm³/1000S. : +- 8.0

LOW IDLE

Rated speed rpm : 375
rack travel mm : 6.00
Tolerance mm : +- 0.20
Del. quantity
cm³/1000 strokes : 14.0
Tolerance
cm³/1000 strokes : +- 3.0
Check tolerance
cm³/1000S. : +- 5.5
Spreed
Tolerance
cm³/1000 strokes : 3.5
Check tolerance
cm³/1000S. : 5.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 22.05.95
Test oil : ISO 4113
Combination No. : 0 402 736 887
Injection pump
Pump designation : PES6P120A120RS7369
EP type number : 0 412 726 935
Governor
Governor design. : RQV400...1400PA1211K
Governor no. : 0 421 815 464

Cust. part No. : 3929689

Customer-spec. information
Customer : CDC
Motor : 6BTA-A
Power KW : 160.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet
temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 086

Inlet press. bar : 2.0
Tolerance bar : + 0.1

Test nozzle holder
assembly : 1 688 901 103

Opening pressure
bar : 208.5
Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0
Tolerance bar : + 1.0
Firing order : 1- 5- 3- 6- 2-
: 4

Phasing : 0-60-120-180-240
: -300
Tolerance : + 0.50
Check
tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 14.45
Tolerance mm : + 0.05

Del. quantity
cm³/1000 strokes : 180.0

Tolerance
cm³/1000 strokes : + 1.0

Check tolerance
cm³/1000s. : + 4.0

Speed
Tolerance
cm³/1000 strokes : 8.0

Check tolerance
cm³/1000s. : 12.0

Del. quantity
cm³/1000 strokes : 16.5
Tolerance
cm³/1000 strokes : + 3.0

Check tolerance
cm³/1000S. : +- 5.0
Spreed
Tolerance
cm³/1000 strokes : 4.0
Check tolerance
cm³/1000S. : 8.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1300
Aneroid pressure
hPa : 1500
Del. quantity
cm³/1000 strokes : 180.0
Tolerance
cm³/1000 strokes : +- 1.0
Check tolerance
cm³/1000S. : +- 4.0
Spreed
Tolerance
cm³/1000 strokes : 8.0
Check tolerance
cm³/1000S. : 12.0

CONTROL LEVER

control lever
position degree : 117.5
tolerance degree : +- 6.0

RATED SPEED

rack travel mm : 13.40
Rated speed rpm : 1450
Tolerance 1/min : +- 25

rack travel mm : 5.50
Rated speed rpm : 1650

rack travel mm : 0.50
Tolerance mm : +- 0.50
Rated speed rpm : 1850

LOW IDLE

control lever
position degree : 74.5
tolerance degree : +- 6.0

Testing:

Rated speed rpm : 420
rack travel mm : 6.40
Tolerance mm : +- 0.20

Rated speed rpm : 300

CRT mm min. : > 9.10

Rated speed rpm : 425

TORQUE CONTROL

Rated speed rpm : 1300
rack travel mm : 14.45
Tolerance mm : +- 0.05

Rated speed rpm : 800
rack travel mm : 12.00
Tolerance mm : +- 0.20

Rated speed rpm : 1100
rack travel mm : 13.50
Tolerance mm : +- 0.20

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 1300
Pressure hPa : 1500

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 1300
rack travel mm : 9.50
Tolerance mm : +- 0.20

Rated speed rpm : 1300

Pressure hPa : 965
rack travel mm : 13.20
Tolerance mm : +- 0.30

Pressure hPa : 390
rack travel mm : 10.80
Tolerance mm : +- 0.20

START CUT-OUT

Rated speed rpm : > 100
Rated speed rpm : < 340

Check
speed 1/min : > 80
Check
speed 1/min : < 350

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 1500
Rated speed rpm : 800
Del. quantity
cm³/1000 strokes : 122.0
Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 6.0
Spreed
Tolerance
cm³/1000 strokes : 8.0
Check tolerance
cm³/1000S. : 12.0

Aneroid pressure
hPa : -
Rated speed rpm : 1300
Del. quantity
cm³/1000 strokes : 79.5
Tolerance
cm³/1000 strokes : ± 2.0
Check tolerance
cm³/1000S. : ± 4.0

BREAKAWAY

Rack travel in mm : 13.40
Rated speed rpm : 1450
Tolerance 1/min : ± 25

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 12.80
Tolerance mm : ± 0.50
Del. quantity
cm³/1000 strokes : 157.0
Tolerance
cm³/1000 strokes : ± 20.0
Check tolerance
cm³/1000S. : ± 25.0

LOW IDLE

D01

Del. quantity
cm³/1000 strokes : 16.5
Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 5.0
Spreed
Tolerance
cm³/1000 strokes : 4.0
Check tolerance
cm³/1000S. : 8.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 12.05.95
Test oil : ISO 4113
Combination No. : 9 400 030 696
Injection pump
Pump designation : PES6A95D320/3RS2881
EP type number : 9 410 037 215
Governor
Governor design. : RSV475...1250A0C826R
Governor no. : 9 420 034 700

Cust. part No. :

Customer-spec. information
Customer : CUMMINS
Motor : 6BT - 165 PS

TEST BENCH REQUIREMENTS

Inlet line : 1.1

Test oil inlet temp. °C : 40
Tolerance °C : ± 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5
Tolerance bar : ± 0.1

Test nozzle holder assembly : 1 688 901 101

Opening pressure bar : 207.0
Tolerance bar : ± 3.0

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0

Prestroke mm : 2.85
Tolerance mm : ± 0.05
Check tolerance mm : ± 0.10

Rack travel in mm : 10.50
Tolerance mm : ± 1.50

Firing order : 1-5-3-6-2-4

Phasing : 0-60-120-180-240
: -300

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 12.60
Tolerance mm : ± 0.05

(B) SETTING OF INJECTION PUMP WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800

Rack travel in mm : 0.80
Tolerance mm : ± 0.20

governor spring
pre-tension
click setting x : 2.50

CONTROL LEVER

control lever
position degree : 50.0
tolerance degree : + 4.0

RATED SPEED

rack travel mm : 11.60
Rated speed rpm : 1316
Tolerance 1/min : + 5

rack travel mm : 4.00
Rated speed rpm : 1410
Tolerance 1/min : + 15

rack travel mm : 1.20
Tolerance mm : + 0.50
Rated speed rpm : 1470

LOW IDLE

control lever
position degree : 25.0
tolerance degree : + 4.0

Testing:

Rated speed rpm : 475
rack travel mm : 5.70
Tolerance mm : + 0.10

rack travel mm : 2.00
Rated speed rpm : 555
Tolerance 1/min : + 30

Rated speed rpm : 100

CRT mm min. : > 19.50

TORQUE CONTROL

Rated speed rpm : 1250
rack travel mm : 12.60
Tolerance mm : + 0.05

Rated speed rpm : 500
rack travel mm : 12.70
Tolerance mm : + 0.10

Rated speed rpm : 800
rack travel mm : 12.70
Tolerance mm : + 0.05

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 800
Pressure hPa : 800
rack travel mm : 12.70
Tolerance mm : + 0.05

MEASUREMENT

Rated speed rpm : 800

Pressure hPa : -
rack travel mm : 10.40
Tolerance mm : + 0.05

Pressure hPa : 500
rack travel mm : 11.30
Tolerance mm : + 0.10

BREAKAWAY

Rack travel in mm : 11.60
Rated speed rpm : 1316
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.25
Tolerance mm : + 0.75

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 12.10.95
Test oil : ISO 4113
Combination No. : 0 403 244 049
Injection pump
Pump designation : PES4MW100/32ORS1521
EP type number : 0 413 204 020
Governor
Governor design. : RQ400/1200MW149
Governor no. : 0 420 082 075
Cust. part No. : 51.11103-7468

Customer-spec. information
Customer : MAN
Motor : D0824 LFL04
Power KW : 81.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet
temp. °C : 40
Tolerance °C : +- 2.0
Overflow valve : 1 419 992 198
Inlet press. bar : 1.5
Test nozzle holde
assembly : 1 688 901 101
Opening pressure
bar : 208.5
Tolerance bar : +- 1.5
Test lines : 1 680 750 008
Outside diameter : 8.0

D04

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0
Tolerance bar : +- 1.0
Prestroke mm : 5.05
Tolerance mm : +- 0.05
Check
tolerance mm : +- 0.10
Rack travel in mm : 10.50
Tolerance mm : +- 1.50
Firing order : 1- 3- 4- 2
Phasing : 0-90-180-270
Tolerance : +- 0.50
Check
tolerance °NW : +- 0.75
Start of delivery mark
Barrel no. : 1

BASIC SETTING

Rated speed rpm : 900
Rack travel in mm : 12.30
Tolerance mm : +- 0.05
Del. quantity
cm³/1000 strokes : 135.0
Tolerance
cm³/1000 strokes : +- 1.0
Check tolerance
cm³/1000S. : +- 4.0
Speed

Tolerance
 cm³/1000 strokes : 4.0

 Check tolerance
 cm³/1000S. : 7.5
 Rated speed rpm : 400
 Rack travel in mm : 4.80
 Tolerance mm : ± 0.20
 Del. quantity
 cm³/1000 strokes : 23.0
 Tolerance
 cm³/1000 strokes : ± 2.0
 Check tolerance
 cm³/1000S. : ± 4.5
 Spreed
 Tolerance
 cm³/1000 strokes : 3.5
 Check tolerance
 cm³/1000S. : 5.5

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm : 400
 guide sleeve
 travel mm : 2.75
 Tolerance mm : ± 0.20
 Rated speed rpm : 1257
 guide sleeve
 travel mm : 7.47
 Tolerance mm : ± 0.15
 Rated speed rpm : 1200
 guide sleeve
 travel mm : 7.00
 Tolerance mm : ± 0.10
 Rated speed rpm : 492
 guide sleeve
 travel mm : 4.36
 Tolerance mm : ± 0.10
 Rated speed rpm : 650
 guide sleeve
 travel mm : 7.00
 Tolerance mm : ± 0.10
 Rated speed rpm : 1420
 guide sleeve
 travel mm : 11.50
 Tolerance mm : ± 0.50

GUIDE SLEEVE POSITION

Rated speed rpm : 600
 Rack travel in mm : 16.50
 Tolerance mm : ± 0.80

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 900
 Aneroid pressure
 hPa : 800
 Del. quantity
 cm³/1000 strokes : 135.0
 Tolerance
 cm³/1000 strokes : ± 1.0
 Check tolerance
 cm³/1000S. : ± 4.0
 Spreed
 Tolerance
 cm³/1000 strokes : 4.0
 Check tolerance
 cm³/1000S. : 7.5

CONTROL LEVER

control lever
 position degree : 98.0
 tolerance degree : ± 4.0

RATED SPEED

rack travel mm : 11.30
 Rated speed rpm : 1253
 Tolerance 1/min : ± 8
 rack travel mm : 4.00
 Rated speed rpm : 1335
 Tolerance 1/min : ± 15
 rack travel mm : 0.50
 Tolerance mm : ± 0.50
 Rated speed rpm : 1450

LOW IDLE

control lever
 position degree : 73.0
 tolerance degree : ± 4.0

Testing:

Rated speed rpm : 400
rack travel mm : 4.80
Tolerance mm : ± 0.10

Rated speed rpm : 300
CRT mm min. : > 6.50

TORQUE CONTROL

Rated speed rpm : 900
rack travel mm : 12.30
Tolerance mm : ± 0.05

Rated speed rpm : 1200
rack travel mm : 12.30
Tolerance mm : ± 0.10

Rated speed rpm : 650
rack travel mm : 12.30
Tolerance mm : ± 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 800
rack travel mm : 12.30
Tolerance mm : ± 0.05

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 500
Tolerance mm : ± 0.10

Rated speed rpm : 500

Pressure hPa : 400
rack travel mm : 1.60
Tolerance mm : ± 0.10

Pressure hPa : 130
rack travel mm : 0.30
Tolerance mm : ± 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 800
Rated speed rpm : 1200

Del. quantity
cm³/1000 strokes : 129.0
Tolerance
cm³/1000 strokes : ± 2.0
Check tolerance
cm³/1000S. : ± 5.0
Spreed
Tolerance
cm³/1000 strokes : 6.0
Check tolerance
cm³/1000S. : 9.0

Aneroid pressure
hPa : 800
Rated speed rpm : 650
Del. quantity
cm³/1000 strokes : 140.0
Tolerance
cm³/1000 strokes : ± 2.0
Check tolerance
cm³/1000S. : ± 5.0

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 93.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 3.0

BREAKAWAY

Rack travel in mm : 11.30
Rated speed rpm : 1253
Tolerance 1/min : ± 8

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm³/1000 strokes : 110.0
Tolerance
cm³/1000 strokes : ± 5.0
Check tolerance
cm³/1000S. : ± 8.0

LOW IDLE

Rated speed rpm : 400
rack travel mm : 4.80
Tolerance mm : ± 0.20

Del. quantity
cm³/1000 strokes : 23.0
Tolerance
cm³/1000 strokes : ± 2.0
Check tolerance
cm³/1000s. : ± 4.5
Spreed
Tolerance
cm³/1000 strokes : 3.5
Check tolerance
cm³/1000s. : 5.5

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 01.12.95
Test oil : ISO 4113

Combination No. : 0 402 848 300

Injection pump
Pump designation : PE8P120A520LS8518
EP type number : 0 412 828 201

Governor
Governor design. : RQV300...1150PA1039
: -3K
Governor no. : 0 421 815 980

Cust. part No. : 51.11103-7492

Customer-spec. information
Customer : MAN
Motor : D 2848 LE 403
Power KW : 588.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet
temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 078

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Overflow quantity
min. l/h : 170
Tolerance l/h : + 15.0

Test nozzle holde
assembly : 1 688 901 105

Opening pressure
bar : 208.5
Tolerance bar : + 1.5

D08

Test lines : 1 680 750 089
Outside diameter : 8.0
x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : + 1.0

Prestroke mm : 5.65
Tolerance mm : + 0.05
Check
tolerance mm : + 0.10

Rack travel in mm : 13.00
Tolerance mm : + 0.50

Firing order : 8- 7- 2- 6- 3
: - 5- 4- 1

Phasing : 0-45-90-135-180
: -225-270-315
Tolerance : + 0.30
Check
tolerance °NW : + 0.50

Start of delivery blocking

Barrel no. : 8

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm : 13.70
Tolerance mm : + 0.05

Del. quantity
cm3/1000 strokes : 337.0

<hr/>	
Tolerance	
cm3/1000 strokes	: +- 1.0
<hr/>	
Check tolerance	
cm3/1000S.	: +- 4.0
<hr/>	
Spreed	
Tolerance	
cm3/1000 strokes	: 8.0
<hr/>	
Check tolerance	
cm3/1000S.	: 12.0
<hr/>	
Rated speed rpm	: 300
<hr/>	
Rack travel in mm	: 5.00
Tolerance mm	: +- 0.20
Del. quantity	
cm3/1000 strokes	: 49.0
Tolerance	
cm3/1000 strokes	: +- 3.0
Check tolerance	
cm3/1000S.	: +- 8.0
Spreed	
Tolerance	
cm3/1000 strokes	: 8.0
Check tolerance	
cm3/1000S.	: 12.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm	: 300
guide sleeve	
travel mm	: 1.61
Tolerance mm	: +- 0.20
<hr/>	
Rated speed rpm	: 1206
guide sleeve	
travel mm	: 9.84
Tolerance mm	: +- 0.15
<hr/>	
Rated speed rpm	: 797
guide sleeve	
travel mm	: 6.36
Tolerance mm	: +- 0.25
<hr/>	
Rated speed rpm	: 460
guide sleeve	
travel mm	: 3.78
Tolerance mm	: +- 0.25
<hr/>	
Rated speed rpm	: 1500
guide sleeve	
travel mm	: 13.50

Tolerance mm : +- 0.50

GUIDE SLEEVE POSITION

Rated speed rpm	: 1327
<hr/>	
Rack travel in mm	: 12.70
Tolerance mm	: +- 1.30

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm	: 1150
Aneroid pressure	
hPa	: 2000
Del. quantity	
cm3/1000 strokes	: 337.0
Tolerance	
cm3/1000 strokes	: +- 1.0
Check tolerance	
cm3/1000S.	: +- 4.0
Spreed	
Tolerance	
cm3/1000 strokes	: 8.0
Check tolerance	
cm3/1000S.	: 12.0

CONTROL LEVER

control lever	
position degree	: 118.0
tolerance degree	: +- 4.0

RATED SPEED

rack travel mm	: 12.70
Rated speed rpm	: 1195
Tolerance 1/min	: +- 5
<hr/>	
rack travel mm	: 4.00
Rated speed rpm	: 1325
Tolerance 1/min	: +- 15
<hr/>	
rack travel mm	: 0.50
Tolerance mm	: +- 0.50
Rated speed rpm	: 1400

LOW IDLE

control lever	
position degree	: 71.0
tolerance degree	: +- 4.0

Testing:

Rated speed rpm : 300
rack travel mm : 5.00
Tolerance mm : ± 0.10

Rated speed rpm : 200

CRT mm min. : > 6.90

Rated speed rpm : 340

TORQUE CONTROL

Rated speed rpm : 1150
rack travel mm : 13.70
Tolerance mm : ± 0.05

Rated speed rpm : 1000
rack travel mm : 13.65
Tolerance mm : ± 0.10

Rated speed rpm : 850
rack travel mm : 12.60
Tolerance mm : ± 0.10

Rated speed rpm : 650
rack travel mm : 11.40
Tolerance mm : ± 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 1150
Pressure hPa : 2000
rack travel mm : 13.70
Tolerance mm : ± 0.05

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 1150
rack travel mm : 7.70
Tolerance mm : ± 0.15

Rated speed rpm : 1150

Pressure hPa : 220
rack travel mm : 8.05
Tolerance mm : ± 0.05

Pressure hPa : 1050
rack travel mm : 11.90
Tolerance mm : ± 0.15

START CUT-OUT

Rated speed rpm : > 170
Rated speed rpm : < 230

Check
speed 1/min : > 150
Check
speed 1/min : < 240

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 2000
Rated speed rpm : 1000
Del. quantity
cm³/1000 strokes : 344.0
Tolerance
cm³/1000 strokes : ± 4.0
Check tolerance
cm³/1000S. : ± 8.0

Aneroid pressure
hPa : 2000
Rated speed rpm : 850
Del. quantity
cm³/1000 strokes : 321.0
Tolerance
cm³/1000 strokes : ± 4.0
Check tolerance
cm³/1000S. : ± 8.0

Aneroid pressure
hPa : 2000
Rated speed rpm : 650
Del. quantity
cm³/1000 strokes : 299.0
Tolerance
cm³/1000 strokes : ± 4.0
Check tolerance
cm³/1000S. : ± 8.0

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 185.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 4.0

BREAKAWAY

Rack travel in mm : 12.70

Rated speed rpm : 1195
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.50
Tolerance mm : +- 0.50
Del. quantity
cm³/1000 strokes : 130.0
Tolerance
cm³/1000 strokes : +- 15.0
Check tolerance
cm³/1000S. : +- 19.0

LOW IDLE

Rated speed rpm : 300
rack travel mm : 5.00
Tolerance mm : +- 0.20
Del. quantity
cm³/1000 strokes : 49.0
Tolerance
cm³/1000 strokes : +- 3.0
Check tolerance
cm³/1000S. : +- 8.0
Spreed
Tolerance
cm³/1000 strokes : 8.0
Check tolerance
cm³/1000S. : 12.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 11.12.95
Test oil : ISO 4113

Combination No. : 0 400 076 960

Injection pump
Pump designation : PES6M55C320RS179
EP type number : 0 410 056 985

Governor
Governor design. : RSF315/2000M65-6
Governor no. : 0 420 021 161

Cust. part No. :

Customer-spec. information
Customer : MB-PKW
Motor : OM603A D35 GW
Power KW : 100.0

TEST BENCH REQUIREMENTS

Test oil inlet
temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 469 990 351

Inlet press. bar : 1.0

Test nozzle holde
assembly : 1 688 901 111

Opening pressure
bar : 148.5
Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : +- 1.0

Prestroke mm : 1.75
Tolerance mm : +- 0.05
Check
tolerance mm : +- 0.10

Rack travel in mm : 21.00
Tolerance mm : +- 1.00

Firing order : 1- 5- 3- 6- 2-
: 4

Phasing : 0-60-120-180-240
: -300

Start of delivery blocking

°NW after s.o.d. : 17.00
Tolerance : +- 0.20
Check
tolerance °NW : +- 0.30

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 13.65
Tolerance mm : +- 0.05

Del. quantity
cm³/1000 strokes : 58.5

Tolerance
cm³/1000 strokes : +- 0.5

Check tolerance
cm³/1000S. : + 1.5

Spread
Tolerance
cm³/1000 strokes : 2.5

Check tolerance
cm³/1000S. : 3.0

Rated speed rpm : 290

Rack travel in mm : 6.30
Tolerance mm : + 0.10

Del. quantity
cm³/1000 strokes : 10.0

Tolerance
cm³/1000 strokes : + 0.5

Spread
Tolerance
cm³/1000 strokes : 1.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

IDLE STAGE

Rack travel in mm : 5.50
Tolerance mm : + 0.25

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1000
Ref. pressure

ALDA / ADA hPa : 1900

Del. quantity
cm³/1000 strokes : 58.5

Tolerance
cm³/1000 strokes : + 0.5

Check tolerance
cm³/1000S. : + 1.5

Spread
Tolerance
cm³/1000 strokes : 2.5

Check tolerance
cm³/1000S. : 3.0

RATED SPEED

control lever
position degree : 50.0

rack travel mm : 6.50
Rated speed rpm : 2350

rack travel mm : 0.50
Tolerance mm : + 0.50
Rated speed rpm : 2700

SET IDLE CONTROL LEVER POSITION

Rated speed rpm : 1000

CRT mm max. : 1.95

LOW IDLE

control lever
position degree : 10.0
tolerance degree : + 2.0

Setting point w/out bumper spring

Rated speed rpm : 290

rack travel mm : 6.30

SET IDLE AUXILIARY SPRING

Rated speed rpm : 400

rack travel mm : 4.80

Tolerance mm : + 0.10

Load pick-up

Rated speed rpm : 200

CRT mm min. : > 7.50

Rated speed rpm : 1000

CRT mm max. : 1.95

rack travel mm : 6.30

Rated speed rpm : 290

TORQUE CONTROL

Rated speed rpm : 1000

rack travel mm : 13.65

Tolerance mm : + 0.05

Rated speed rpm : 1600

rack travel mm : 12.85

Tolerance mm : + 0.10

Rated speed rpm : 2000

rack travel mm : 11.70

Tolerance mm : + 0.10

ADJUSTMENT TEST ADA/ALDA

SETTING

Rated speed rpm : 1000
Ref. pressure
ALDA / ADA hPa : 1600
rack travel mm : -0.40
Tolerance mm : +- 0.20

MEASUREMENT

Rated speed rpm : 1000
Ref. pressure
ALDA / ADA hPa : 1100
rack travel mm : -2.95
Tolerance mm : +- 0.10

Rated speed rpm : 1000
Ref. pressure
ALDA / ADA hPa : 750
rack travel mm : -4.80
Tolerance mm : +- 0.20

FUEL DELIVERY CHARACTERISTICS

Ref. pressure
ALDA / ADA hPa : 1900
Rated speed rpm : 1600
Del. quantity
cm3/1000 strokes : 55.8
Tolerance
cm3/1000 strokes : +- 0.8
Check tolerance
cm3/1000S. : +- 1.8
Spreed
Tolerance
cm3/1000 strokes : 2.5
Check tolerance
cm3/1000S. : 3.0

Ref. pressure
ALDA / ADA hPa : 1900
Rated speed rpm : 2000
Spreed
Del. quantity
cm3/1000 strokes : 51.0
Tolerance
cm3/1000 strokes : +- 1.0
Check tolerance
cm3/1000S. : +- 2.0
Spreed
Tolerance
cm3/1000 strokes : 2.5
Check tolerance
cm3/1000S. : 3.0

Ref. pressure
ALDA / ADA hPa : 1100
Rated speed rpm : 1000
Del. quantity
cm3/1000 strokes : 41.5
Tolerance
cm3/1000 strokes : +- 0.5
Check tolerance
cm3/1000S. : +- 1.5
Spreed
Tolerance
cm3/1000 strokes : 2.5
Check tolerance
cm3/1000S. : 3.0

HIGH IDLE

Ref. pressure
ALDA / ADA hPa : 1900

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.10
Del. quantity
cm3/1000 strokes : 52.0
Spreed
Tolerance
cm3/1000 strokes : 6.0
Check tolerance
cm3/1000S. : 6.0

LOW IDLE

Del. quantity
cm3/1000 strokes : 11.8
Check tolerance
cm3/1000S. : +- 2.3
Spreed
Check tolerance
cm3/1000S. : 1.5

Grad : > 37.00
Grad : < 35.50

SETTING PNEUMATIC FAST IDLE (ELA)

control lever
position degree : 10.0
tolerance degree : +- 2.0

SETTING/TESTING ELECTRONIC IDLE
REGULATION (ELR)

control lever
position degree : 10.0
tolerance degree : +- 2.0
Rated speed rpm : 315

Rack travel in mm : 12.50
Tolerance mm : +- 0.70
Del. quantity
cm³/1000 strokes : 48.0
Del. quantity
cm³/1000 strokes : 48.0
Tolerance
cm³/1000 strokes : +- 4.0
Tolerance
cm³/1000 strokes : +- 4.0

Current A : 1.80

control lever
position degree : 50.0
Rated speed rpm : 2700

Rack travel in mm : 0.50
Tolerance mm : +- 0.50

Current short-
duration A : 3.00

Starting test

Rated speed rpm : 100

Current A : 1.80

ADJUSTMENT

control lever
position degree : 50.0

TESTING PNEUMATIC SHUTOFF DEVICE

Rated speed rpm : 290

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 11.12.95
Test oil : ISO 4113

Combination No. : 0 400 076 961

Injection pump
Pump designation : PES6M55C320RS157-1
EP type number : 0 410 056 991

Governor
Governor design. : RSF315/2300M65-5
Governor no. : 0 420 021 145

Cust. part No. :

Customer-spec. information

Customer : MB-PKW
Motor : OM603A-ECE
Power KW : 110.0

TEST BENCH REQUIREMENTS

Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0

Overflow valve : 1 469 990 351

Inlet press. bar : 1.0

Test nozzle holder
assembly : 1 688 901 111

Opening pressure
bar : 148.5
Tolerance bar : ± 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0

Prestroke mm : 2.25
Tolerance mm : ± 0.05
Check
tolerance mm : ± 0.10

Rack travel in mm : 21.00
Tolerance mm : ± 1.00

Firing order : 1- 5- 3- 6- 2-
: 4

Phasing : 0-60-120-180-240
: -300

Start of delivery blocking

°NW after s.o.d. : 19.50
Tolerance : ± 0.20
Check
tolerance °NW : ± 0.30

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 13.95
Tolerance mm : ± 0.05

Del. quantity
cm³/1000 strokes : 53.0

Tolerance
cm³/1000 strokes : ± 0.5

Check tolerance
 cm³/1000S. : + 1.5

 Spreed
 Tolerance
 cm³/1000 strokes : 2.5

 Check tolerance
 cm³/1000S. : 3.0
 Rated speed rpm : 290
 Rack travel in mm : 5.40
 Tolerance mm : + 0.10
 Del. quantity
 cm³/1000 strokes : 7.0
 Tolerance
 cm³/1000 strokes : + 0.5
 Spreed
 Tolerance
 cm³/1000 strokes : 1.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

—————
IDLE STAGE

Rack travel in mm : 6.50
 Tolerance mm : + 0.10

—————
FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1000
 Ref. pressure
 ALDA / ADA hPa : 1850
 Del. quantity
 cm³/1000 strokes : 53.0
 Tolerance
 cm³/1000 strokes : + 0.5
 Check tolerance
 cm³/1000S. : + 1.5
 Spreed
 Tolerance
 cm³/1000 strokes : 2.5
 Check tolerance
 cm³/1000S. : 3.0

—————
RATED SPEED

control lever
 position degree : 50.0
 rack travel mm : 8.30
 Rated speed rpm : 2500

rack travel mm : +0.50
 Tolerance mm : + 0.50
 Rated speed rpm : 2950

—————
SET IDLE CONTROL LEVER POSITION

Rated speed rpm : 1000
 CRT mm max. : 1.75

—————
LOW IDLE

control lever
 position degree : 10.0
 tolerance degree : + 2.0

Setting point w/out bumper spring
 Rated speed rpm : 290
 rack travel mm : 5.40

SET IDLE AUXILIARY SPRING

Rated speed rpm : 360
 rack travel mm : 4.30
 Tolerance mm : + 0.10

rack travel mm : 2.50
 Rated speed rpm : 560
 Tolerance 1/min : + 50

Load pick-up

Rated speed rpm : 200
 CRT mm min. : > 7.00

Rated speed rpm : 1000
 CRT mm max. : 1.75

rack travel mm : 5.40
 Rated speed rpm : 290

—————
TORQUE CONTROL

Rated speed rpm : 1000
 rack travel mm : 13.95
 Tolerance mm : + 0.05

Rated speed rpm : 1600
 rack travel mm : 13.20
 Tolerance mm : + 0.10

Rated speed rpm : 2200

rack travel mm : 12.40
Tolerance mm : ± 0.10

ADJUSTMENT TEST ADA/ALDA

SETTING

Rated speed rpm : 1000
Ref. pressure
ALDA / ADA hPa : 1600

MEASUREMENT

Rated speed rpm : 1000
Ref. pressure
ALDA / ADA hPa : 1100

Rated speed rpm : 1000
Ref. pressure
ALDA / ADA hPa : 750

FUEL DELIVERY CHARACTERISTICS

Ref. pressure
ALDA / ADA hPa : 1850
Rated speed rpm : 1600
Del. quantity
cm³/1000 strokes : 51.8
Tolerance
cm³/1000 strokes : ± 0.8
Check tolerance
cm³/1000S. : ± 1.8
Spreed
Tolerance
cm³/1000 strokes : 2.5
Check tolerance
cm³/1000S. : 3.0

Ref. pressure
ALDA / ADA hPa : 1850
Rated speed rpm : 2200
Spreed
Del. quantity
cm³/1000 strokes : 49.5
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 2.0
Spreed
Tolerance
cm³/1000 strokes : 2.5
Check tolerance
cm³/1000S. : 3.0

Ref. pressure
ALDA / ADA hPa : 1100
Rated speed rpm : 1000

Del. quantity
cm³/1000 strokes : 36.5
Tolerance
cm³/1000 strokes : ± 0.5
Check tolerance
cm³/1000S. : ± 1.5
Spreed
Tolerance
cm³/1000 strokes : 2.5
Check tolerance
cm³/1000S. : 3.0

HIGH IDLE

Ref. pressure
ALDA / ADA hPa : 1850

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.10
Del. quantity
cm³/1000 strokes : 52.0
Spreed
Tolerance
cm³/1000 strokes : 6.0
Check tolerance
cm³/1000S. : 6.0

LOW IDLE

Del. quantity
cm³/1000 strokes : 8.6
Check tolerance
cm³/1000S. : ± 2.3
Spreed
Check tolerance
cm³/1000S. : 1.5

Grad : > 35.50

Grad : < 33.00

SETTING PNEUMATIC FAST IDLE (ELA)

control lever
position degree : 10.0
tolerance degree : ± 2.0

SETTING/TESTING ELECTRONIC IDLE
REGULATION (ELR)

control lever
position degree : 10.0
tolerance degree : \pm 2.0
Rated speed rpm : 315
Tolerance
cm³/1000 strokes : \pm 4.0
Current A : 1.80

control lever
position degree : 50.0
Rated speed rpm : 2950

Rack travel in mm : 0.50
Tolerance mm : \pm 0.50

Current short-
duration A : 3.00

Starting test

Rated speed rpm : 100
Current A : 1.80

ADJUSTMENT

control lever
position degree : 50.0

TESTING PNEUMATIC SHUTOFF DEVICE

Rated speed rpm : 290

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 07.12.95
Test oil : ISO 4113

Combination No. : 0 400 836 021

Injection pump
Pump designation : PES6A80D410/3RS2527
EP type number : 0 410 886 059

Governor
Governor design. : RQV300...1400AB951DL
Governor no. : 0 420 214 215

Cust. part No. :

Customer-spec. information
Customer : KHD
Motor : F6L912

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holder
assembly : 0 681 343 009

Opening pressure
bar : 173.5
Tolerance bar : ± 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0
x inside diameter : 2.0

D20

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0

Prestroke mm : 1.95
Tolerance mm : ± 0.05
Check
tolerance mm : ± 0.10

Rack travel in mm : 10.50
Tolerance mm : ± 1.50

Firing order : 1- 5- 3- 6- 2-
: 4

Phasing : 0-60-120-180-240
: -300
Tolerance : ± 0.50
Check
tolerance °NW : ± 0.75

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm : 12.05
Tolerance mm : ± 0.05

Del. quantity
cm³/1000 strokes : 69.5

Tolerance
cm³/1000 strokes : ± 0.5

Check tolerance
cm³/1000S. : ± 2.0

Speed
Tolerance
cm³/1000 strokes : 2.5

Check tolerance
 cm³/1000S. : 4.0
 Rated speed rpm : 300
 Rack travel in mm : 6.00
 Tolerance mm : + 0.10
 Del. quantity
 cm³/1000 strokes : 12.0
 Tolerance
 cm³/1000 strokes : + 1.5
 Check tolerance
 cm³/1000S. : + 3.5
 Spreed
 Tolerance
 cm³/1000 strokes : 4.0
 Check tolerance
 cm³/1000S. : 6.0

(B) SETTING OF INJECTION PUMP
 WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm : 300
 guide sleeve
 travel mm : 1.20
 Tolerance mm : + 0.15

Rated speed rpm : 1454
 guide sleeve
 travel mm : 8.60
 Tolerance mm : + 0.15

Rated speed rpm : 970
 guide sleeve
 travel mm : 5.00
 Tolerance mm : + 0.25

Rated speed rpm : 1720
 guide sleeve
 travel mm : 11.50
 Tolerance mm : + 0.50

GUIDE SLEEVE POSITION

Rated speed rpm : 1440
 Rack travel in mm : 16.50
 Tolerance mm : + 1.30

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1400
 Aneroid pressure
 hPa : -

D21

Del. quantity
 cm³/1000 strokes : 69.5
 Tolerance
 cm³/1000 strokes : + 0.5
 Check tolerance
 cm³/1000S. : + 2.0
 Spreed
 Tolerance
 cm³/1000 strokes : 2.5
 Check tolerance
 cm³/1000S. : 4.0

CONTROL LEVER

control lever
 position degree : 103.0
 tolerance degree : + 4.0

RATED SPEED

rack travel mm : 11.00
 Rated speed rpm : 1445
 Tolerance 1/min : + 5

rack travel mm : 4.00
 Rated speed rpm : 1550
 Tolerance 1/min : + 15

rack travel mm : 0.50
 Tolerance mm : + 0.50
 Rated speed rpm : 1700

LOW IDLE

control lever
 position degree : 50.0
 tolerance degree : + 4.0

Testing:

Rated speed rpm : 300
 rack travel mm : 6.00
 Tolerance mm : + 0.10

Rated speed rpm : 100
 CRT mm min. : > 7.50
 Rated speed rpm : 495

TORQUE CONTROL

Dimension a mm : 0.80
 Rated speed rpm : 1400

rack travel mm : 12.05
Tolerance mm : + 0.05

Rated speed rpm : 700
rack travel mm : 12.85
Tolerance mm : + 0.10

Rated speed rpm : 1045
rack travel mm : 12.70
Tolerance mm : + 0.10

Rated speed rpm : 1150
rack travel mm : 12.40
Tolerance mm : + 0.10

START CUT-OUT

Rated speed rpm : > 100
Rated speed rpm : < 220

Check
speed 1/min : > 80
Check
speed 1/min : < 240

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : -
Rated speed rpm : 700
Del. quantity
cm³/1000 strokes : 65.5
Tolerance
cm³/1000 strokes : + 1.5
Check tolerance
cm³/1000S. : + 3.0

BREAKAWAY

Rack travel in mm : 11.00
Rated speed rpm : 1445
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 17.45
Tolerance mm : + 0.15

LOW IDLE

D22

Rated speed rpm : 300
rack travel mm : 6.00
Tolerance mm : + 0.10
Del. quantity
cm³/1000 strokes : 12.0
Tolerance
cm³/1000 strokes : + 1.5
Check tolerance
cm³/1000S. : + 3.5
Speed
Tolerance
cm³/1000 strokes : 4.0
Check tolerance
cm³/1000S. : 6.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 04.12.95
Test oil : ISO 4113
Combination No. : 0 402 036 761
Injection pump
Pump designation : PES6P110A12ORS3353
EP type number :
Governor
Governor design. : RQV450...1100PA1233K
Governor no. : 0 421 815 474

Cust. part No. : 3926886

Customer-spec. information
Customer : CDC
Motor : 6CTA
Power KW : 187.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2
Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0
Overflow valve : 2 417 413 086
Inlet press. bar : 2.0
Tolerance bar : ± 0.1
Test nozzle holde
assembly : 1 688 901 103
Opening pressure
bar : 208.5
Tolerance bar : ± 1.5
Test lines : 1 680 750 015
Outside diameter : 6.0

D23

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0
Tolerance bar : ± 1.0
Prestroke mm : 3.60
Tolerance mm : ± 0.05
Check
tolerance mm : ± 0.10
Rack travel in mm : 10.50
Tolerance mm : ± 1.50
Firing order : 1- 5- 3- 6- 2-
: 4
Phasing : 0-60-120-180-240
: -300
Tolerance : ± 0.30
Check
tolerance °NW : ± 0.50
Start of delivery blocking
°NW after s.o.d. : 8.50
Tolerance : ± 0.10
Check
tolerance °NW : ± 0.23
Barrel no. : 1
Beginning of delivery differende
and maximum rack
travel : 13.00
Difference ° CS : 1.20

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 13.15
Tolerance mm : +- 0.05

Del. quantity
cm3/1000 strokes : 200.0

Tolerance
cm3/1000 strokes : +- 1.0

Check tolerance
cm3/1000S. : +- 4.0

Spreed
Tolerance
cm3/1000 strokes : 8.0

Check tolerance
cm3/1000S. : 12.0

Del. quantity
cm3/1000 strokes : 21.5

Tolerance
cm3/1000 strokes : +- 3.0

Check tolerance
cm3/1000S. : +- 5.0

Spreed
Tolerance

cm3/1000 strokes : 4.0

Check tolerance
cm3/1000S. : 8.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm : 500
guide sleeve
travel mm : 1.87
Tolerance mm : +- 0.20

Rated speed rpm : 1163
guide sleeve
travel mm : 7.50
Tolerance mm : +- 0.15

Rated speed rpm : 860
guide sleeve
travel mm : 4.55
Tolerance mm : +- 0.25

Rated speed rpm : 1560
guide sleeve
travel mm : 13.50
Tolerance mm : +- 0.50

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1000
Aneroid pressure
hPa : 1200
Del. quantity
cm3/1000 strokes : 200.0
Tolerance
cm3/1000 strokes : +- 1.0
Check tolerance
cm3/1000S. : +- 4.0
Spreed
Tolerance
cm3/1000 strokes : 8.0
Check tolerance
cm3/1000S. : 12.0

CONTROL LEVER

control lever
position degree : 110.0
tolerance degree : +- 4.0

RATED SPEED

rack travel mm : 11.30
Rated speed rpm : 1155
Tolerance 1/min : +- 15

rack travel mm : 4.00
Rated speed rpm : 1265
Tolerance 1/min : +- 15

rack travel mm : 0.50
Tolerance mm : +- 0.50
Rated speed rpm : 1325

LOW IDLE

control lever
position degree : 76.0
tolerance degree : +- 4.0

Testing:

Rated speed rpm : 500
rack travel mm : 5.80
Tolerance mm : +- 0.20

Rated speed rpm : 500
CRT mm min. : > 7.40

Rated speed rpm : 500

TORQUE CONTROL

Rated speed rpm : 1000
rack travel mm : 13.15
Tolerance mm : ± 0.05

Rated speed rpm : 750
rack travel mm : 12.80
Tolerance mm : ± 0.20

Rated speed rpm : 1100
rack travel mm : 12.45
Tolerance mm : ± 0.10

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 1000
Pressure hPa : 1200

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 1000
rack travel mm : 10.35
Tolerance mm : ± 0.20

Rated speed rpm : 1000

Pressure hPa : 890
rack travel mm : 12.60
Tolerance mm : ± 0.30

Pressure hPa : 720
rack travel mm : 11.15
Tolerance mm : ± 0.20

START CUT-OUT

Rated speed rpm : > 100
Rated speed rpm : < 380

Check speed 1/min : > 80
Check speed 1/min : < 390

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 1200

Rated speed rpm : 750
Del. quantity
cm³/1000 strokes : 189.5
Tolerance

cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 6.0

Speed
Tolerance
cm³/1000 strokes : 8.0
Check tolerance
cm³/1000S. : 12.0

Aneroid pressure
hPa : 1200
Rated speed rpm : 1100
Del. quantity
cm³/1000 strokes : 178.5
Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 6.0

Aneroid pressure
hPa : -
Rated speed rpm : 1000
Del. quantity
cm³/1000 strokes : 121.0
Tolerance
cm³/1000 strokes : ± 2.0
Check tolerance
cm³/1000S. : ± 4.0

BREAKAWAY

Rack travel in mm : 11.30
Rated speed rpm : 1155
Tolerance 1/min : ± 15

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 21.00
Tolerance mm : ± 0.50
Del. quantity
cm³/1000 strokes : 161.0
Tolerance
cm³/1000 strokes : ± 20.0
Check tolerance
cm³/1000S. : ± 25.0

LOW IDLE

Del. quantity
cm³/1000 strokes : 21.5
Tolerance
cm³/1000 strokes : +- 3.0
Check tolerance
cm³/1000S. : +- 5.0
Spreed
Tolerance
cm³/1000 strokes : 4.0
Check tolerance
cm³/1000S. : 8.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 02.01.96
Test oil : ISO 4113

Combination No. : 0 400 074 892

Injection pump
Pump designation : PES4M55C320RS167
EP type number : 0 410 054 960

Governor
Governor design. : RSF360/1900M70-7
Governor no. : 0 420 021 153

Cust. part No. : T8

Customer-spec. information
Customer : MB-NFZ
Motor : OM601-D23 A,S,CH
Power KW : 58.0

TEST BENCH REQUIREMENTS

Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0

Overflow valve : 1 469 990 351

Inlet press. bar : 1.0

Test nozzle holder
assembly : 1 688 901 111

Opening pressure
bar : 148.5
Tolerance bar : ± 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0
x inside diameter : 2.0
x length mm : 600

D27

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0

Prestroke mm : 2.05
Tolerance mm : ± 0.05
Check
tolerance mm : ± 0.10

Rack travel in mm : 21.00
Tolerance mm : ± 1.00

Firing order : 1- 3- 4- 2

Phasing : 0-90-180-270

Start of delivery blocking

°NW after s.o.d. : 15.50
Tolerance : ± 0.20
Check
tolerance °NW : ± 0.30

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 12.85
Tolerance mm : ± 0.05

Del. quantity
cm³/1000 strokes : 41.5

Tolerance
cm³/1000 strokes : ± 0.5

Check tolerance
cm³/1000S. : ± 1.5

Speed

Tolerance
 cm³/1000 strokes : 2.5

Check tolerance
 cm³/1000S. : 3.0

Rated speed rpm : 335

Rack travel in mm : 5.20
 Tolerance mm : +- 0.10

Del. quantity
 cm³/1000 strokes : 6.5
 Tolerance
 cm³/1000 strokes : +- 0.5

Speed
 Tolerance
 cm³/1000 strokes : 1.0

(B) SETTING OF INJECTION PUMP
 WITH GOVERNOR

IDLE STAGE

Rack travel in mm : 6.25
 Tolerance mm : +- 0.25

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1000
 Ref. pressure
 ALDA / ADA hPa : 1100
 Del. quantity
 cm³/1000 strokes : 41.5
 Tolerance
 cm³/1000 strokes : +- 0.5
 Check tolerance
 cm³/1000S. : +- 1.5
 Speed
 Tolerance
 cm³/1000 strokes : 2.5
 Check tolerance
 cm³/1000S. : 3.0

RATED SPEED

control lever
 position degree : 50.0

rack travel mm : 7.25
 Rated speed rpm : 2100

rack travel mm : 0.50
 Tolerance mm : +- 0.50
 Rated speed rpm : 2500

SET IDLE CONTROL LEVER POSITION

Rated speed rpm : 1000
 CRT mm max. : 1.45

LOW IDLE

control lever
 position degree : 13.0
 tolerance degree : +- 2.0

Setting point w/out bumper spring
 Rated speed rpm : 335
 rack travel mm : 5.20

SET IDLE AUXILIARY SPRING

Rated speed rpm : 400
 rack travel mm : 4.00
 Tolerance mm : +- 0.10

rack travel mm : 2.50
 Rated speed rpm : 600
 Tolerance 1/min : +- 50

Load pick-up

Rated speed rpm : 250
 CRT mm min. : > 7.50

Rated speed rpm : 1000
 CRT mm max. : 1.45

rack travel mm : 5.20
 Rated speed rpm : 335

TORQUE CONTROL

Rated speed rpm : 1000
 rack travel mm : 12.85
 Tolerance mm : +- 0.05

Rated speed rpm : 1400
 rack travel mm : 12.35
 Tolerance mm : +- 0.15

Rated speed rpm : 1900
 rack travel mm : 11.55
 Tolerance mm : +- 0.15

Rated speed rpm : 500

rack travel mm : 12.15
Tolerance mm : +- 0.15

Rated speed rpm : 800
rack travel mm : 12.55
Tolerance mm : +- 0.15

ADJUSTMENT TEST ADA/ALDA

SETTING

Rated speed rpm : 1000
Ref. pressure
ALDA / ADA hPa : 950
rack travel mm : -0.10
Tolerance mm : +- 0.10

MEASUREMENT

Rated speed rpm : 1000
Ref. pressure
ALDA / ADA hPa : 900
rack travel mm : -0.60
Tolerance mm : +- 0.10

Rated speed rpm : 1000
Ref. pressure
ALDA / ADA hPa : 750
rack travel mm : -2.00
Tolerance mm : +- 0.20

FUEL DELIVERY CHARACTERISTICS

Ref. pressure
ALDA / ADA hPa : 1100
Rated speed rpm : 1400
Del. quantity
cm3/1000 strokes : 40.8
Tolerance
cm3/1000 strokes : +- 0.8
Check tolerance
cm3/1000S. : +- 1.8
Spreed
Tolerance
cm3/1000 strokes : 2.5
Check tolerance
cm3/1000S. : 3.0

Ref. pressure
ALDA / ADA hPa : 1100
Rated speed rpm : 1900
Spreed
Del. quantity
cm3/1000 strokes : 41.0
Tolerance
cm3/1000 strokes : +- 1.0

Check tolerance
cm3/1000S. : +- 2.0
Spreed
Tolerance
cm3/1000 strokes : 2.5
Check tolerance
cm3/1000S. : 3.0

Ref. pressure
ALDA / ADA hPa : 1100
Rated speed rpm : 500
Del. quantity
cm3/1000 strokes : 36.3
Tolerance
cm3/1000 strokes : +- 0.8
Check tolerance
cm3/1000S. : +- 1.8
Tolerance
cm3/1000 strokes : 2.5
Check tolerance
cm3/1000S. : 3.0

Ref. pressure
ALDA / ADA hPa : 1100
Rated speed rpm : 800
Del. quantity
cm3/1000 strokes : 39.3
Tolerance
cm3/1000 strokes : +- 0.8
Check tolerance
cm3/1000S. : +- 1.8
Spreed
Tolerance
cm3/1000 strokes : 2.5
Check tolerance
cm3/1000S. : 3.0

HIGH IDLE

Ref. pressure
ALDA / ADA hPa : 1100

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.10
Del. quantity
cm3/1000 strokes : 52.0
Spreed
Tolerance
cm3/1000 strokes : 6.0
Check tolerance
cm3/1000S. : 6.0

LOW IDLE

Del. quantity
cm³/1000 strokes : 7.8
Check tolerance
cm³/1000S. : ± 2.3
Spreed
Check tolerance
cm³/1000S. : 1.5

SETTING PNEUMATIC FAST IDLE (ELA)

control lever
position degree : 13.0
tolerance degree : ± 2.0

SETTING/TESTING ELECTRONIC IDLE
REGULATION (ELR)

control lever
position degree : 13.0
tolerance degree : ± 2.0
Rated speed rpm : 360

Rack travel in mm : 13.00
Tolerance mm : ± 0.70

Current A : 1.80

control lever
position degree : 50.0
Rated speed rpm : 2500

Rack travel in mm : 0.50
Tolerance mm : ± 0.50

Current short-
duration A : 3.00

Starting test

Rated speed rpm : 100

Current A : 1.80

ADJUSTMENT

control lever
position degree : 50.0

TESTING PNEUMATIC SHUTOFF DEVICE

Rated speed rpm : 335

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 28.12.95
Test oil : ISO 4113
Combination No. : 0 400 463 121
Injection pump
Pump designation : PES3A80D410/3RS1324
EP type number : 0 410 483 017

Governor
Governor design. : RSV325...900A7C602
: -4L
Governor no. : 0 420 232 604

Cust. part No. :

Customer-spec. information
Customer : KHD
Motor : F3L912

TEST BENCH REQUIREMENTS

Inlet line : 1.3

Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holder
assembly : 0 681 343 009

Opening pressure
bar : 173.5
Tolerance bar : ± 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0

Prestroke mm : 1.95
Tolerance mm : ± 0.05
Check
tolerance mm : ± 0.10

Rack travel in mm : 10.50
Tolerance mm : ± 1.50

Firing order : 1- 3- 2

Phasing : 0-120-240

BASIC SETTING

Rated speed rpm : 880

Rack travel in mm : 11.20
Tolerance mm : ± 0.05

Del. quantity
cm³/1000 strokes : 50.5

Tolerance
cm³/1000 strokes : ± 0.5

Check tolerance
cm³/1000S. : ± 2.0

Speed
Tolerance
cm³/1000 strokes : 2.5

Check tolerance
cm³/1000S. : 4.0

Rated speed rpm : 325
Rack travel in mm : 8.40
Tolerance mm : +- 0.10
Del. quantity
cm3/1000 strokes : 11.0
Tolerance
cm3/1000 strokes : +- 1.5
Check tolerance
cm3/1000S. : +- 3.5
Spread
Tolerance
cm3/1000 strokes : 4.0
Check tolerance
cm3/1000S. : 6.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800
Rack travel in mm : 0.50
Tolerance mm : +- 0.20

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 880
Aneroid pressure
hPa : -
Del. quantity
cm3/1000 strokes : 50.5
Tolerance
cm3/1000 strokes : +- 0.5
Check tolerance
cm3/1000S. : +- 2.0
Spread
Tolerance
cm3/1000 strokes : 2.5
Check tolerance
cm3/1000S. : 4.0

CONTROL LEVER

control lever
position degree : 108.0
tolerance degree : +- 4.0

RATED SPEED

rack travel mm : 10.20
Rated speed rpm : 925
Tolerance 1/min : +- 5

rack travel mm : 4.00
Rated speed rpm : 960
Tolerance 1/min : +- 15

rack travel mm : 0.85
Tolerance mm : +- 0.55
Rated speed rpm : 1100

rack travel mm : 4.00
Rated speed rpm : 975

LOW IDLE

control lever
position degree : 77.0
tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 325
rack travel mm : 7.90

Testing:

Rated speed rpm : 325
rack travel mm : 8.40
Tolerance mm : +- 0.10

rack travel mm : 2.00
Rated speed rpm : 450
Tolerance 1/min : +- 30

TORQUE CONTROL

Rated speed rpm : 880
rack travel mm : 11.20
Tolerance mm : +- 0.05

Rated speed rpm : 500
rack travel mm : 11.25
Tolerance mm : +- 0.10

BREAKAWAY

Rack travel in mm : 10.20
Rated speed rpm : 925
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.25
Tolerance mm : \pm 0.75
Del. quantity
cm³/1000 strokes : 125.0
Tolerance
cm³/1000 strokes : \pm 7.5
Check tolerance
cm³/1000S. : \pm 10.0

LOW IDLE

Rated speed rpm : 325
rack travel mm : 8.40
Tolerance mm : \pm 0.10
Del. quantity
cm³/1000 strokes : 11.0
Tolerance
cm³/1000 strokes : \pm 1.5
Check tolerance
cm³/1000S. : \pm 3.5
Spreed
Tolerance
cm³/1000 strokes : 4.0
Check tolerance
cm³/1000S. : 6.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 05.01.96
Test oil : ISO 4113

Combination No. : 0 400 075 925

Injection pump
Pump designation : PES5M55C320RS201
EP type number : 0 410 055 972

Governor
Governor design. : RSF350/2500M56-13
Governor no. : 0 420 021 171

Cust. part No. :

Customer-spec. information
Customer : MB-PKW
Motor : OM605
Power KW : 83.0

TEST BENCH REQUIREMENTS

Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0

Overflow valve : 1 469 990 351

Inlet press. bar : 1.0

Test nozzle holde
assembly : 1 688 901 111

Opening pressure
bar : 148.5
Tolerance bar : ± 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0
x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0

Prestroke mm : 1.75
Tolerance mm : ± 0.05
Check
tolerance mm : ± 0.10

Rack travel in mm : 21.00
Tolerance mm : ± 1.00

Firing order : 1- 2- 4- 5- 3

Phasing : 0-72-144-216-288

Start of delivery blocking

°NW after s.o.d. : 16.50
Tolerance : ± 0.20
Check
tolerance °NW : ± 0.30

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm : 12.75
Tolerance mm : ± 0.05

Del. quantity
cm³/1000 strokes : 37.0

Tolerance
cm³/1000 strokes : ± 0.5

Check tolerance
cm³/1000S. : ± 1.5

Spreed

Tolerance
 cm³/1000 strokes : 2.5

Check tolerance
 cm³/1000S. : 3.0

Rated speed rpm : 350

Rack travel in mm : 7.40
 Tolerance mm : + 0.10
 Del. quantity
 cm³/1000 strokes : 8.5
 Tolerance
 cm³/1000 strokes : + 0.5
 Spreed
 Tolerance
 cm³/1000 strokes : 1.0

(B) SETTING OF INJECTION PUMP
 WITH GOVERNOR

IDLE STAGE

Rack travel in mm : 6.25
 Tolerance mm : + 0.25

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1400
 Ref. pressure
 ALDA / ADA hPa : 1100
 Del. quantity
 cm³/1000 strokes : 37.0
 Tolerance
 cm³/1000 strokes : + 0.5
 Check tolerance
 cm³/1000S. : + 1.5
 Spreed
 Tolerance
 cm³/1000 strokes : 2.5
 Check tolerance
 cm³/1000S. : 3.0

RATED SPEED

control lever
 position degree : 50.0

rack travel mm : 7.50
 Rated speed rpm : 2700

rack travel mm : 0.50
 Tolerance mm : + 0.50
 Rated speed rpm : 3150

E07

SET IDLE CONTROL LEVER POSITION

Rated speed rpm : 1400
 CRT mm max. : 1.95

LOW IDLE

Setting point w/out bumper spring
 Rated speed rpm : 350
 rack travel mm : 7.40

SET IDLE AUXILIARY SPRING

Rated speed rpm : 475
 rack travel mm : 5.40
 Tolerance mm : + 0.10

rack travel mm : 3.00
 Rated speed rpm : 700
 Tolerance 1/min : + 50

Load pick-up

Rated speed rpm : 250
 CRT mm min. : > 10.00

Rated speed rpm : 1400
 CRT mm max. : 1.95

rack travel mm : 7.40
 Rated speed rpm : 350

TORQUE CONTROL

Rated speed rpm : 1400
 rack travel mm : 12.75
 Tolerance mm : + 0.05

Rated speed rpm : 2300
 rack travel mm : 12.30
 Tolerance mm : + 0.15

Rated speed rpm : 2500
 rack travel mm : 11.90
 Tolerance mm : + 0.15

ADJUSTMENT TEST ADA/ALDA

SETTING

Rated speed rpm : 1400

Ref. pressure
ALDA / ADA hPa : 940
rack travel mm : -0.10
Tolerance mm : ± 0.10

MEASUREMENT

Rated speed rpm : 1400
Ref. pressure
ALDA / ADA hPa : 900
rack travel mm : -0.40
Tolerance mm : ± 0.10

Rated speed rpm : 1400
Ref. pressure
ALDA / ADA hPa : 750
rack travel mm : -1.50
Tolerance mm : ± 0.20

FUEL DELIVERY CHARACTERISTICS

Ref. pressure
ALDA / ADA hPa : 1100
Rated speed rpm : 2300
Del. quantity
cm³/1000 strokes : 39.3
Tolerance
cm³/1000 strokes : ± 0.8
Check tolerance
cm³/1000S. : ± 1.8
Spreed
Tolerance
cm³/1000 strokes : 2.5
Check tolerance
cm³/1000S. : 3.0

Ref. pressure
ALDA / ADA hPa : 1100
Rated speed rpm : 2500
Spreed
Del. quantity
cm³/1000 strokes : 38.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 2.0
Spreed
Tolerance
cm³/1000 strokes : 2.5
Check tolerance
cm³/1000S. : 3.0

HIGH IDLE

Ref. pressure
ALDA / ADA hPa : 1100

E08

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 21.60
Tolerance mm : ± 1.50
Del. quantity
cm³/1000 strokes : 55.0
Tolerance
cm³/1000 strokes : ± 4.0
Check tolerance
cm³/1000S. : ± 5.0
Spreed
Tolerance
cm³/1000 strokes : 6.0
Check tolerance
cm³/1000S. : 6.0

LOW IDLE

Del. quantity
cm³/1000 strokes : 9.5
Check tolerance
cm³/1000S. : ± 2.3
Spreed
Check tolerance
cm³/1000S. : 1.5

Grad : > 49.00

Grad : < 46.50

SETTING PNEUMATIC FAST IDLE (ELA)

Rated speed rpm : 400
Rack travel in mm : 8.25
Tolerance mm : ± 0.70
Del. quantity
cm³/1000 strokes : 12.0
Tolerance
cm³/1000 strokes : ± 3.5
Check tolerance
cm³/1000S. : ± 4.5
Vacuum hPa : 400.0

SETTING/TESTING ELECTRONIC IDLE
REGULATION (ELR)

control lever
position degree : 50.0

ADJUSTMENT

control lever
position degree : 50.0

TESTING PNEUMATIC SHUTOFF DEVICE

Rated speed rpm : 350

End of test specification sheet



BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 05.01.96
Test oil : ISO 4113

Combination No. : 0 400 075 926

Injection pump
Pump designation : PES5M55C32ORS201
EP type number : 0 410 055 972

Governor
Governor design. : RSF350/2500M75-3
Governor no. : 0 420 021 173

Cust. part No. :

Customer-spec. information
Customer : MB-PKW
Motor : OM605
Power KW : 83.0

TEST BENCH REQUIREMENTS

Test oil inlet
temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 469 990 351

Inlet press. bar : 1.0

Test nozzle holde
assembly : 1 688 901 111

Opening pressure
bar : 148.5
Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

E10

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : + 1.0

Prestroke mm : 1.75
Tolerance mm : + 0.05
Check
tolerance mm : + 0.10

Rack travel in mm : 21.00
Tolerance mm : + 1.00

Firing order : 1- 2- 4- 5- 3

Phasing : 0-72-144-216-288

Start of delivery blocking

°NW after s.o.d. : 16.50
Tolerance : + 0.20
Check
tolerance °NW : + 0.30

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm : 12.75
Tolerance mm : + 0.05

Del. quantity
cm³/1000 strokes : 37.0

Tolerance
cm³/1000 strokes : + 0.5

Check tolerance
cm³/1000S. : + 1.5

Spread
Tolerance
cm³/1000 strokes : 2.5

Check tolerance
cm³/1000S. : 3.0

Rated speed rpm : 350

Rack travel in mm : 7.40
Tolerance mm : + 0.10

Del. quantity
cm³/1000 strokes : 8.5

Tolerance
cm³/1000 strokes : + 0.5

Spread
Tolerance
cm³/1000 strokes : 1.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

IDLE STAGE

Rack travel in mm : 6.25
Tolerance mm : + 0.25

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1400

Ref. pressure
ALDA / ADA hPa : 1100

Del. quantity
cm³/1000 strokes : 37.0

Tolerance
cm³/1000 strokes : + 0.5

Check tolerance
cm³/1000S. : + 1.5

Spread
Tolerance
cm³/1000 strokes : 2.5

Check tolerance
cm³/1000S. : 3.0

RATED SPEED

control lever
position degree : 50.0

rack travel mm : 7.50
Rated speed rpm : 2700

rack travel mm : 0.50
Tolerance mm : + 0.50

Rated speed rpm : 3150

SET IDLE CONTROL LEVER POSITION

Rated speed rpm : 1400

CRT mm max. : 1.95

LOW IDLE

Setting point w/out bumper spring

Rated speed rpm : 350

rack travel mm : 7.40

SET IDLE AUXILIARY SPRING

Rated speed rpm : 475

rack travel mm : 5.40

Tolerance mm : + 0.10

rack travel mm : 3.00

Rated speed rpm : 700

Tolerance 1/min : + 50

Load pick-up

Rated speed rpm : 250

CRT mm min. : > 10.00

Rated speed rpm : 1400

CRT mm max. : 1.95

rack travel mm : 7.40

Rated speed rpm : 350

TORQUE CONTROL

Rated speed rpm : 1400

rack travel mm : 12.75

Tolerance mm : + 0.05

Rated speed rpm : 2300

rack travel mm : 12.30

Tolerance mm : + 0.15

Rated speed rpm : 2500

rack travel mm : 11.90

Tolerance mm : + 0.15

ADJUSTMENT TEST ADA/ALDA

SETTING

Rated speed rpm : 1400
Ref. pressure
ALDA / ADA hPa : 940
rack travel mm : -0.10
Tolerance mm : + 0.10

MEASUREMENT

Rated speed rpm : 1400
Ref. pressure
ALDA / ADA hPa : 900
rack travel mm : -0.40
Tolerance mm : + 0.10

Rated speed rpm : 1400
Ref. pressure
ALDA / ADA hPa : 750
rack travel mm : -1.50
Tolerance mm : + 0.20

FUEL DELIVERY CHARACTERISTICS

Ref. pressure
ALDA / ADA hPa : 1100
Rated speed rpm : 2300
Del. quantity
cm³/1000 strokes : 39.3
Tolerance
cm³/1000 strokes : + 0.8
Check tolerance
cm³/1000S. : + 1.8
Spreed
Tolerance
cm³/1000 strokes : 2.5
Check tolerance
cm³/1000S. : 3.0

Ref. pressure
ALDA / ADA hPa : 1100
Rated speed rpm : 2500
Spreed
Del. quantity
cm³/1000 strokes : 38.0
Tolerance
cm³/1000 strokes : + 1.0
Check tolerance
cm³/1000S. : + 2.0
Spreed
Tolerance
cm³/1000 strokes : 2.5
Check tolerance
cm³/1000S. : 3.0

HIGH IDLE

Ref. pressure
ALDA / ADA hPa : 1100

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 21.60
Tolerance mm : + 1.50
Del. quantity
cm³/1000 strokes : 55.0
Tolerance
cm³/1000 strokes : + 4.0
Check tolerance
cm³/1000S. : + 5.0
Spreed
Tolerance
cm³/1000 strokes : 6.0
Check tolerance
cm³/1000S. : 6.0

LOW IDLE

Del. quantity
cm³/1000 strokes : 9.5
Check tolerance
cm³/1000S. : + 2.3
Spreed
Check tolerance
cm³/1000S. : 1.5

Grad : > 49.00

Grad : < 46.50

SETTING PNEUMATIC FAST IDLE (ELA)

Rated speed rpm : 400
Rack travel in mm : 8.25
Tolerance mm : + 0.70
Del. quantity
cm³/1000 strokes : 12.0
Tolerance
cm³/1000 strokes : + 3.5
Check tolerance
cm³/1000S. : + 4.5
Vacuum hPa : 400.0

SETTING/TESTING ELECTRONIC IDLE REGULATION (ELR)

control lever
position degree : 50.0

ADJUSTMENT

control lever
position degree : 50.0

Rated speed rpm : 1400
rack travel mm : 1.70
Tolerance mm : \pm 0.15

TESTING PNEUMATIC SHUTOFF DEVICE

Rated speed rpm : 350

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 04.01.96
Test oil : ISO 4113

Combination No. : 0 400 076 954

Injection pump
Pump designation : PES6M55C320RS203
EP type number : 0 410 056 982

Governor
Governor design. : RSF315/2500M70-10
Governor no. : 0 420 021 175

Cust. part No. :

Customer-spec. information
Customer : MB-PKW
Motor : OM606
Power KW : 100.0

TEST BENCH REQUIREMENTS

Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0

Overflow valve : 1 469 990 351

Inlet press. bar : 1.0

Test nozzle holde
assembly : 1 688 901 111

Opening pressure
bar : 148.5
Tolerance bar : ± 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0

Prestroke mm : 1.75
Tolerance mm : ± 0.05
Check
tolerance mm : ± 0.10

Rack travel in mm : 21.00
Tolerance mm : ± 1.00

Firing order : 1- 5- 3- 6- 2-
: 4

Phasing : 0-60-120-180-240
: -300

Start of delivery blocking

°NW after s.o.d. : 16.50
Tolerance : ± 0.20
Check
tolerance °NW : ± 0.30

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 13.35
Tolerance mm : ± 0.05

Del. quantity
cm³/1000 strokes : 39.0

Tolerance
cm³/1000 strokes : ± 0.5

Check tolerance
cm³/1000S. : ± 1.5

Speed

Tolerance
 cm³/1000 strokes : 2.5

Check tolerance
 cm³/1000S. : 3.0

Rated speed rpm : 290

Rack travel in mm : 7.30
 Tolerance mm : +- 0.10

Del. quantity
 cm³/1000 strokes : 8.5
 Tolerance
 cm³/1000 strokes : +- 0.5

Spread
 Tolerance
 cm³/1000 strokes : 1.0

(B) SETTING OF INJECTION PUMP
 WITH GOVERNOR

IDLE STAGE

Rack travel in mm : 6.25
 Tolerance mm : +- 0.25

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1100
 Ref. pressure
 ALDA / ADA hPa : 1100
 Del. quantity
 cm³/1000 strokes : 39.0
 Tolerance
 cm³/1000 strokes : +- 0.5
 Check tolerance
 cm³/1000S. : +- 1.5

Spread
 Tolerance
 cm³/1000 strokes : 2.5
 Check tolerance
 cm³/1000S. : 3.0

RATED SPEED

control lever
 position degree : 50.0

rack travel mm : 8.70
 Rated speed rpm : 2700

rack travel mm : 1.00
 Tolerance mm : +- 1.00
 Rated speed rpm : 3000

SET IDLE CONTROL LEVER POSITION

Rated speed rpm : 1100
 CRT mm max. : 1.95

LOW IDLE

control lever
 position degree : 10.5
 tolerance degree : +- 2.0

Setting point w/out bumper spring
 Rated speed rpm : 290
 rack travel mm : 7.30

SET IDLE AUXILIARY SPRING

Rated speed rpm : 400
 rack travel mm : 6.00
 Tolerance mm : +- 0.10

rack travel mm : 3.00
 Rated speed rpm : 700
 Tolerance 1/min : +- 50

Load pick-up

Rated speed rpm : 220
 CRT mm min. : 9.90

Rated speed rpm : 1100
 CRT mm max. : 1.95

rack travel mm : 7.30
 Rated speed rpm : 290

TORQUE CONTROL

Rated speed rpm : 1100
 rack travel mm : 13.35
 Tolerance mm : +- 0.05

Rated speed rpm : 2000
 rack travel mm : 12.75
 Tolerance mm : +- 0.15

Rated speed rpm : 2500
 rack travel mm : 12.25
 Tolerance mm : +- 0.15

Rated speed rpm : 500

rack travel mm : 12.50
Tolerance mm : +- 0.15
Rated speed rpm : 900
rack travel mm : 13.10
Tolerance mm : +- 0.15

ADJUSTMENT TEST ADA/ALDA

SETTING

Rated speed rpm : 1100
Ref. pressure
ALDA / ADA hPa : 940
rack travel mm : -0.10
Tolerance mm : +- 0.10

MEASUREMENT

Rated speed rpm : 1100
Ref. pressure
ALDA / ADA hPa : 900
rack travel mm : -0.40
Tolerance mm : +- 0.10

Rated speed rpm : 1100
Ref. pressure
ALDA / ADA hPa : 750
rack travel mm : -1.50
Tolerance mm : +- 0.20

FUEL DELIVERY CHARACTERISTICS

Ref. pressure
ALDA / ADA hPa : 1100
Rated speed rpm : 2000
Del. quantity
cm³/1000 strokes : 40.1
Tolerance
cm³/1000 strokes : +- 0.8
Check tolerance
cm³/1000S. : +- 1.8
Spreed
Tolerance
cm³/1000 strokes : 2.5
Check tolerance
cm³/1000S. : 3.0

Ref. pressure
ALDA / ADA hPa : 1100
Rated speed rpm : 2500
Spreed
Del. quantity
cm³/1000 strokes : 39.5
Tolerance
cm³/1000 strokes : +- 1.0

Check tolerance
cm³/1000S. : +- 2.0
Spreed
Tolerance
cm³/1000 strokes : 2.5
Check tolerance
cm³/1000S. : 3.0

Ref. pressure
ALDA / ADA hPa : 1100
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 32.9
Tolerance
cm³/1000 strokes : +- 0.8
Check tolerance
cm³/1000S. : +- 1.8
Tolerance
cm³/1000 strokes : 2.5
Check tolerance
cm³/1000S. : 3.0

Ref. pressure
ALDA / ADA hPa : 1100
Rated speed rpm : 900
Del. quantity
cm³/1000 strokes : 37.3
Tolerance
cm³/1000 strokes : +- 0.8
Check tolerance
cm³/1000S. : +- 1.8
Spreed
Tolerance
cm³/1000 strokes : 2.5
Check tolerance
cm³/1000S. : 3.0

HIGH IDLE

Ref. pressure
ALDA / ADA hPa : 1100

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 21.60
Tolerance mm : +- 1.50
Del. quantity
cm³/1000 strokes : 59.0
Tolerance
cm³/1000 strokes : +- 4.0
Check tolerance
cm³/1000S. : +- 5.0
Spreed
Tolerance
cm³/1000 strokes : 8.0

Check tolerance
cm³/1000S. : 8.5

LOW IDLE

Rated speed rpm : 290
rack travel mm : 7.50
Tolerance mm : +- 0.15
Del. quantity
cm³/1000 strokes : 9.5
Check tolerance
cm³/1000S. : +- 2.3
Spreed
Check tolerance
cm³/1000S. : 1.5

SETTING PNEUMATIC FAST IDLE (ELA)

control lever
position degree : 10.5
tolerance degree : +- 2.0

SETTING/TESTING ELECTRONIC IDLE
REGULATION (ELR)

control lever
position degree : 10.5
tolerance degree : +- 2.0
Rated speed rpm : 315

Rack travel in mm : 13.20
Tolerance mm : +- 0.70
Del. quantity
cm³/1000 strokes : 34.0
Tolerance
cm³/1000 strokes : +- 3.5

Current A : 1.80

control lever
position degree : 50.0
Rated speed rpm : 3000

Rack travel in mm : 1.00
Tolerance mm : +- 1.00

Current short-
duration A : 3.00

Starting test

Rated speed rpm : 100
Current A : 1.80

ADJUSTMENT

control lever
position degree : 50.0

TESTING PNEUMATIC SHUTOFF DEVICE

Rated speed rpm : 290

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 05.01.96
Test oil : ISO 4113

Combination No. : 0 400 076 955

Injection pump
Pump designation : PES6M55C32ORS203
EP type number : 0 410 056 982

Governor
Governor design. : RSF315/2500M76
Governor no. : 0 420 021 174

Cust. part No. :

Customer-spec. information
Customer : MB-PKW
Motor : OM606
Power KW : 100.0

TEST BENCH REQUIREMENTS

Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0

Overflow valve : 1 469 990 351

Inlet press. bar : 1.0

Test nozzle holde
assembly : 1 688 901 111

Opening pressure
bar : 148.5
Tolerance bar : ± 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0
x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0

Prestroke mm : 1.75
Tolerance mm : ± 0.05
Check
tolerance mm : ± 0.10

Rack travel in mm : 21.00
Tolerance mm : ± 1.00

Firing order : 1- 5- 3- 6- 2-
: 4

Phasing : 0-60-120-180-240
: -300

Start of delivery blocking

°NW after s.o.d. : 16.50
Tolerance : ± 0.20
Check
tolerance °NW : ± 0.30

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 13.35
Tolerance mm : ± 0.05

Del. quantity
cm³/1000 strokes : 39.0

Tolerance
cm³/1000 strokes : ± 0.5

Check tolerance
cm³/1000S. : ± 1.5

Speed

Tolerance
 cm³/1000 strokes : 2.5

Check tolerance
 cm³/1000S. : 3.0

Rated speed rpm : 300

Rack travel in mm : 7.30
 Tolerance mm : +- 0.10

Del. quantity
 cm³/1000 strokes : 8.5
 Tolerance
 cm³/1000 strokes : +- 0.5

Spread
 Tolerance
 cm³/1000 strokes : 1.0

(B) SETTING OF INJECTION PUMP
 WITH GOVERNOR

IDLE STAGE

Rack travel in mm : 6.25
 Tolerance mm : +- 0.25

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1100
 Ref. pressure
 ALDA / ADA hPa : 1100
 Del. quantity
 cm³/1000 strokes : 39.0
 Tolerance
 cm³/1000 strokes : +- 0.5
 Check tolerance
 cm³/1000S. : +- 1.5
 Spread
 Tolerance
 cm³/1000 strokes : 2.5
 Check tolerance
 cm³/1000S. : 3.0

RATED SPEED

control lever
 position degree : 50.0

rack travel mm : 8.70
 Rated speed rpm : 2700

rack travel mm : 1.00
 Tolerance mm : +- 1.00
 Rated speed rpm : 3000

SET IDLE CONTROL LEVER POSITION

Rated speed rpm : 1100
 CRT mm max. : 1.95

LOW IDLE

control lever
 position degree : 10.5
 tolerance degree : +- 2.0

Setting point w/out bumper spring

Rated speed rpm : 300
 rack travel mm : 7.30

SET IDLE AUXILIARY SPRING

Rated speed rpm : 400
 rack travel mm : 6.00
 Tolerance mm : +- 0.10

rack travel mm : 3.00
 Rated speed rpm : 700
 Tolerance 1/min : +- 50

Load pick-up

Rated speed rpm : 220
 CRT mm min. : 9.80

Rated speed rpm : 1100
 CRT mm max. : 1.95

rack travel mm : 7.30
 Rated speed rpm : 300

TORQUE CONTROL

Rated speed rpm : 1100
 rack travel mm : 13.35
 Tolerance mm : +- 0.05

Rated speed rpm : 2000
 rack travel mm : 12.75
 Tolerance mm : +- 0.15

Rated speed rpm : 2500
 rack travel mm : 12.25
 Tolerance mm : +- 0.15

Rated speed rpm : 500

rack travel mm : 12.50
Tolerance mm : +- 0.15

Rated speed rpm : 900
rack travel mm : 13.10
Tolerance mm : +- 0.15

ADJUSTMENT TEST ADA/ALDA

SETTING

Rated speed rpm : 1100
Ref. pressure
ALDA / ADA hPa : 940
rack travel mm : -0.10
Tolerance mm : +- 0.10

MEASUREMENT

Rated speed rpm : 1100
Ref. pressure
ALDA / ADA hPa : 900
rack travel mm : -0.40
Tolerance mm : +- 0.10

Rated speed rpm : 1100
Ref. pressure
ALDA / ADA hPa : 750
rack travel mm : -1.50
Tolerance mm : +- 0.20

FUEL DELIVERY CHARACTERISTICS

Ref. pressure
ALDA / ADA hPa : 1100
Rated speed rpm : 2000
Del. quantity
cm3/1000 strokes : 40.1
Tolerance
cm3/1000 strokes : +- 0.8
Check tolerance
cm3/1000S. : +- 1.8
Spreed
Tolerance
cm3/1000 strokes : 2.5
Check tolerance
cm3/1000S. : 3.0

Ref. pressure
ALDA / ADA hPa : 1100
Rated speed rpm : 2500
Spreed
Del. quantity
cm3/1000 strokes : 39.5
Tolerance
cm3/1000 strokes : +- 1.0

Check tolerance
cm3/1000S. : +- 2.0
Spreed
Tolerance
cm3/1000 strokes : 2.5
Check tolerance
cm3/1000S. : 3.0

Ref. pressure
ALDA / ADA hPa : 1100
Rated speed rpm : 500
Del. quantity
cm3/1000 strokes : 32.6
Tolerance
cm3/1000 strokes : +- 0.8
Check tolerance
cm3/1000S. : +- 1.8
Tolerance
cm3/1000 strokes : 2.5
Check tolerance
cm3/1000S. : 3.0

Ref. pressure
ALDA / ADA hPa : 1100
Rated speed rpm : 900
Del. quantity
cm3/1000 strokes : 36.9
Tolerance
cm3/1000 strokes : +- 0.8
Check tolerance
cm3/1000S. : +- 1.8
Spreed
Tolerance
cm3/1000 strokes : 2.5
Check tolerance
cm3/1000S. : 3.0

HIGH IDLE

Ref. pressure
ALDA / ADA hPa : 1100

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 21.60
Tolerance mm : +- 1.50
Del. quantity
cm3/1000 strokes : 55.0
Tolerance
cm3/1000 strokes : +- 4.0
Check tolerance
cm3/1000S. : +- 5.0
Spreed
Tolerance
cm3/1000 strokes : 6.0

Check tolerance
cm³/1000S. : 6.0

LOW IDLE

Rated speed rpm : 300
rack travel mm : 7.30
Tolerance mm : +- 0.15
Del. quantity
cm³/1000 strokes : 9.5
Check tolerance
cm³/1000S. : +- 2.3
Spreed
Check tolerance
cm³/1000S. : 1.5

SETTING PNEUMATIC FAST IDLE (ELA)

control lever
position degree : 10.5
tolerance degree : +- 2.0

SETTING/TESTING ELECTRONIC IDLE
REGULATION (ELR)

control lever
position degree : 10.5
tolerance degree : +- 2.0
Rated speed rpm : 315

Rack travel in mm : 13.20
Tolerance mm : +- 0.70
Del. quantity
cm³/1000 strokes : 34.0
Tolerance
cm³/1000 strokes : +- 3.5

Current A : 1.80

control lever
position degree : 50.0
Rated speed rpm : 3000

Rack travel in mm : 1.00
Tolerance mm : +- 1.00

Current short-
duration A : 3.00

Starting test

Rated speed rpm : 100
Current A : 1.80

ADJUSTMENT

control lever
position degree : 50.0

Rated speed rpm : 1100
rack travel mm : 1.70
Tolerance mm : +- 0.20

TESTING PNEUMATIC SHUTOFF DEVICE

Rated speed rpm : 300

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 10.01.96
Test oil : ISO 4113
Combination No. : 0 400 836 036
Injection pump
Pump designation : PES6A85D410/3RS2761
EP type number : 0 410 886 895
Governor
Governor design. : RQV300...1250AB1188
: -1L
Governor no. : 0 420 212 205

Cust. part No. :

Customer-spec. information
Customer : KHD
Motor : BF6L913
Power KW : 118.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet
temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holder
assembly : 0 681 343 009

Opening pressure
bar : 173.5
Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : +- 1.0

Prestroke mm : 2.55
Tolerance mm : +- 0.05
Check
tolerance mm : +- 0.10

Rack travel in mm : 10.50
Tolerance mm : +- 1.50

Firing order : 1- 5- 3- 6- 2-
: 4

Phasing : 0-60-120-180-240
: -300

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 12.35
Tolerance mm : +- 0.05

Del. quantity
cm³/1000 strokes : 88.0

Tolerance
cm³/1000 strokes : +- 0.5

Check tolerance
cm³/1000S. : +- 2.5

Speed
Tolerance
cm³/1000 strokes : 3.0

Check tolerance
 cm³/1000S. : 7.0
 Rated speed rpm : 300
 Rack travel in mm : 7.80
 Tolerance mm : ± 0.10
 Del. quantity
 cm³/1000 strokes : 13.0
 Tolerance
 cm³/1000 strokes : ± 2.0
 Check tolerance
 cm³/1000S. : ± 4.0
 Spreed
 Tolerance
 cm³/1000 strokes : 4.5
 Check tolerance
 cm³/1000S. : 7.0

(B) SETTING OF INJECTION PUMP
 WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm : 300
 guide sleeve
 travel mm : 1.35
 Tolerance mm : ± 0.05
 Rated speed rpm : 1300
 guide sleeve
 travel mm : 8.95
 Tolerance mm : ± 0.05
 Rated speed rpm : 380
 guide sleeve
 travel mm : 2.60
 Tolerance mm : ± 0.10
 Rated speed rpm : 430
 guide sleeve
 travel mm : 3.20
 Tolerance mm : ± 0.10
 Rated speed rpm : 1390
 guide sleeve
 travel mm : 10.15
 Tolerance mm : ± 0.05

GUIDE SLEEVE POSITION

Rated speed rpm : 1265
 Rack travel in mm : 16.50
 Tolerance mm : ± 1.30

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1250
 Aneroid pressure
 hPa : 700
 Del. quantity
 cm³/1000 strokes : 88.0
 Tolerance
 cm³/1000 strokes : ± 0.5
 Check tolerance
 cm³/1000S. : ± 2.5
 Spreed
 Tolerance
 cm³/1000 strokes : 3.0
 Check tolerance
 cm³/1000S. : 7.0

CONTROL LEVER

control lever
 position degree : 125.0
 tolerance degree : ± 4.0

RATED SPEED

rack travel mm : 11.30
 Rated speed rpm : 1295
 Tolerance 1/min : ± 5
 rack travel mm : 4.00
 Rated speed rpm : 1395
 Tolerance 1/min : ± 15
 rack travel mm : 0.50
 Tolerance mm : ± 0.50
 Rated speed rpm : 1500

LOW IDLE

control lever
 position degree : 72.0
 tolerance degree : ± 4.0

Testing:

Rated speed rpm : 300
 rack travel mm : 7.80
 Tolerance mm : ± 0.10
 Rated speed rpm : 100
 CRT mm min. : > 9.30

Rated speed rpm : 405

TORQUE CONTROL

Dimension a mm : 0.80
Rated speed rpm : 1250
rack travel mm : 12.35
Tolerance mm : +- 0.05

Rated speed rpm : 500
rack travel mm : 13.15
Tolerance mm : +- 0.05

Rated speed rpm : 750
rack travel mm : 12.90
Tolerance mm : +- 0.10

Rated speed rpm : 820
rack travel mm : 12.90
Tolerance mm : +- 0.10

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 700
rack travel mm : 12.90
Tolerance mm : +- 0.05

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 500
rack travel mm : 11.35
Tolerance mm : +- 0.10

Rated speed rpm : 500

Pressure hPa : 350
rack travel mm : 11.70
Tolerance mm : +- 0.05

START CUT-OUT

Rated speed rpm : > 100
Rated speed rpm : < 220

Check
speed 1/min : > 80
Check
speed 1/min : < 240

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 700
Rated speed rpm : 750
Del. quantity
cm³/1000 strokes : 89.5
Tolerance
cm³/1000 strokes : +- 1.5
Check tolerance
cm³/1000s. : +- 3.5

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 63.0
Tolerance
cm³/1000 strokes : +- 0.5
Check tolerance
cm³/1000s. : +- 2.5

BREAKAWAY

Rack travel in mm : 11.30
Rated speed rpm : 1295
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 17.20
Tolerance mm : +- 0.20
Del. quantity
cm³/1000 strokes : 125.0
Tolerance
cm³/1000 strokes : +- 7.5
Check tolerance
cm³/1000s. : +- 10.0

LOW IDLE

Rated speed rpm : 300
rack travel mm : 7.80
Tolerance mm : +- 0.10
Del. quantity
cm³/1000 strokes : 13.0
Tolerance
cm³/1000 strokes : +- 2.0
Check tolerance
cm³/1000s. : +- 4.0
Speed
Tolerance
cm³/1000 strokes : 4.5

Check tolerance
cm³/1000s. : 7.0

End of test specification sheet



BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 03.01.96
Test oil : ISO 4113

Combination No. : 0 401 876 735

Injection pump
Pump designation : PE6P120A320RS3088
EP type number : 0 411 826 720

Governor
Governor design. : RSV200...1000P4/421R
Governor no. : 0 421 833 142

Cust. part No. : 847612 P09 v. 9/95

Customer-spec. information

Customer : PENTA
Motor : TD120HP

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0

Overflow valve : 1 417 413 010

Inlet press. bar : 1.5

Test nozzle holder
assembly : 1 688 901 019

Opening pressure
bar : 208.5
Tolerance bar : ± 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0

Prestroke mm : 2.45
Tolerance mm : ± 0.05
Check
tolerance mm : ± 0.10

Rack travel in mm : 10.50
Tolerance mm : ± 1.50

Firing order : 1- 5- 3- 6- 2-
: 4

Phasing : 0-60-120-180-240
: -300
Tolerance : ± 0.30
Check
tolerance °NW : ± 0.50

Start of delivery mark
Tolerance : ± 0.50
Check
tolerance °NW : ± 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 11.90
Tolerance mm : ± 0.05

Del. quantity
cm³/1000 strokes : 180.0

Tolerance
cm³/1000 strokes : ± 1.0

Check tolerance
 cm³/1000S. : + 4.0

Spreed
 Tolerance
 cm³/1000 strokes : 6.0

Check tolerance
 cm³/1000S. : 9.0

Rated speed rpm : 250

Rack travel in mm : 4.10
 Tolerance mm : + 0.20

Del. quantity
 cm³/1000 strokes : 18.0
 Tolerance
 cm³/1000 strokes : + 2.0

Check tolerance
 cm³/1000S. : + 5.0

Spreed
 Tolerance
 cm³/1000 strokes : 5.0

Check tolerance
 cm³/1000S. : 7.0

(B) SETTING OF INJECTION PUMP WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800

Rack travel in mm : 0.50
 Tolerance mm : + 0.20

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 700
 Aneroid pressure
 hPa : -
 Del. quantity
 cm³/1000 strokes : 180.0
 Tolerance
 cm³/1000 strokes : + 1.0
 Check tolerance
 cm³/1000S. : + 4.0

Spreed
 Tolerance
 cm³/1000 strokes : 6.0
 Check tolerance
 cm³/1000S. : 9.0

CONTROL LEVER

control lever
 position degree : 58.0
 tolerance degree : + 4.0

control lever
 position degree : 108.0
 tolerance degree : + 4.0

RATED SPEED

rack travel mm : 10.90
 Rated speed rpm : 1025
 Tolerance 1/min : + 5

rack travel mm : 4.00
 Rated speed rpm : 1075
 Tolerance 1/min : + 15

rack travel mm : 1.00
 Tolerance mm : + 0.70
 Rated speed rpm : 1210

LOW IDLE

control lever
 position degree : 72.0
 tolerance degree : + 4.0

control lever
 position degree : 22.0
 tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 250
 rack travel mm : 3.60

Testing:

Rated speed rpm : 250
 rack travel mm : 4.10
 Tolerance mm : + 0.10

rack travel mm : 2.00
 Rated speed rpm : 310
 Tolerance 1/min : + 30

TORQUE CONTROL

Rated speed rpm : 700
 rack travel mm : 11.90
 Tolerance mm : + 0.05

BREAKAWAY

Rack travel in mm : 10.90
Rated speed rpm : 1025
Tolerance 1/min : \pm 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.50
Tolerance mm : \pm 0.50
Del. quantity
cm³/1000 strokes : 415.0
Tolerance
cm³/1000 strokes : \pm 25.0
Check tolerance
cm³/1000S. : \pm 29.0

LOW IDLE

Rated speed rpm : 250
rack travel mm : 4.10
Tolerance mm : \pm 0.20
Del. quantity
cm³/1000 strokes : 18.0
Tolerance
cm³/1000 strokes : \pm 2.0
Check tolerance
cm³/1000S. : \pm 5.0
Spreed
Tolerance
cm³/1000 strokes : 5.0
Check tolerance
cm³/1000S. : 7.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 22.12.95
Test oil : ISO 4113
Combination No. : 0 402 046 871
Injection pump
Pump designation : PES6P120A72ORS3356
EP type number : 0 412 026 783
Governor
Governor design. : RQV450...1050PA1245
Governor no. : 0 421 814 161

Cust. part No. :

Customer-spec. information
Customer : IVECO-FRANCE
Motor : 8465.41.006

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5
Tolerance bar : ± 0.1

Test nozzle holder
assembly : 1 688 901 105

Opening pressure
bar : 208.5
Tolerance bar : ± 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0

Prestroke mm : 3.55
Tolerance mm : ± 0.05
Check
tolerance mm : ± 0.10

Rack travel in mm : 10.50

Firing order : 1- 5- 3- 6- 2-
: 4

Phasing : 0-60-120-180-240
: -300
Tolerance : ± 0.30
Check
tolerance °NW : ± 0.50

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 9.35
Tolerance mm : ± 0.05

Del. quantity
cm³/1000 strokes : 158.0

Tolerance
cm³/1000 strokes : ± 1.0

Check tolerance
cm³/1000s. : ± 4.0

Speed
Tolerance
cm³/1000 strokes : 5.0

Check tolerance
 cm³/1000S. : 9.0
 Rated speed rpm : 450
 Rack travel in mm : > 5.00
 Tolerance mm : + 0.20
 Del. quantity
 cm³/1000 strokes : 24.0
 Tolerance
 cm³/1000 strokes : + 3.0
 Check tolerance
 cm³/1000S. : + 6.0
 Spreed
 Tolerance
 cm³/1000 strokes : 8.0
 Check tolerance
 cm³/1000S. : 12.0

(B) SETTING OF INJECTION PUMP
 WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm : 450
 guide sleeve
 travel mm : 2.70
 Tolerance mm : + 0.20
 Rated speed rpm : 1110
 guide sleeve
 travel mm : 7.40
 Tolerance mm : + 0.15
 Rated speed rpm : 836
 guide sleeve
 travel mm : 5.75
 Tolerance mm : + 0.25
 Rated speed rpm : 580
 guide sleeve
 travel mm : 3.80
 Tolerance mm : + 0.25
 Rated speed rpm : 1550
 guide sleeve
 travel mm : 11.50
 Tolerance mm : + 0.50

GUIDE SLEEVE POSITION

Rated speed rpm : 1405
 Rack travel in mm : 8.30
 Tolerance mm : + 2.70

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1050
 Aneroid pressure
 hPa : -
 Del. quantity
 cm³/1000 strokes : 158.0
 Tolerance
 cm³/1000 strokes : + 1.0
 Check tolerance
 cm³/1000S. : + 4.0
 Spreed
 Tolerance
 cm³/1000 strokes : 5.0
 Check tolerance
 cm³/1000S. : 9.0

CONTROL LEVER

control lever
 position degree : 118.0
 tolerance degree : + 4.0

RATED SPEED

rack travel mm : 8.30
 Rated speed rpm : 1135
 Tolerance 1/min : + 5
 rack travel mm : 4.00
 Rated speed rpm : 1225
 Tolerance 1/min : + 15
 rack travel mm : 0.50
 Tolerance mm : + 0.50
 Rated speed rpm : 1400

LOW IDLE

control lever
 position degree : 71.0
 tolerance degree : + 4.0

Testing:

Rated speed rpm : 450
 rack travel mm : 5.00
 Tolerance mm : + 0.10
 Rated speed rpm : 350
 CRT mm min. : > 6.50

Rated speed rpm : 515

TORQUE CONTROL

Rated speed rpm : 1050
rack travel mm : 9.35
Tolerance mm : +- 0.05

Rated speed rpm : 800
rack travel mm : 9.85
Tolerance mm : +- 0.10

Rated speed rpm : 950
rack travel mm : 9.55
Tolerance mm : +- 0.10

Rated speed rpm : 600
rack travel mm : 9.90
Tolerance mm : +- 0.15

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : -
Rated speed rpm : 800
Del. quantity
cm³/1000 strokes : 170.0
Tolerance
cm³/1000 strokes : +- 2.0
Check tolerance
cm³/1000S. : +- 5.0

BREAKAWAY

Rack travel in mm : 8.30
Rated speed rpm : 1135
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 19.50
Tolerance mm : +- 1.50
Del. quantity
cm³/1000 strokes : 130.0
Tolerance
cm³/1000 strokes : +- 15.0
Check tolerance
cm³/1000S. : +- 19.0

LOW IDLE

Rated speed rpm : 450
rack travel mm : > 5.00
Tolerance mm : +- 0.20
Del. quantity
cm³/1000 strokes : 24.0
Tolerance
cm³/1000 strokes : +- 3.0
Check tolerance
cm³/1000S. : +- 6.0
Speed
Tolerance
cm³/1000 strokes : 8.0
Check tolerance
cm³/1000S. : 12.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 09.01.96
Test oil : ISO 4113

Combination No. : 0 402 076 759

Injection pump
Pump designation : PES6P120A720RS3322
EP type number : 0 412 026 764

Governor
Governor design. : RSV650...1250P8A567
Governor no. : 0 421 833 416

Cust. part No. :

Customer-spec. information
Customer : FNH-GEOTECH
Power KW : 201.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0

Overflow valve : 2 417 413 086

Inlet press. bar : 1.5

Test nozzle holde
assembly : 1 688 901 103

Opening pressure
bar : 208.5
Tolerance bar : ± 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0
x inside diameter : 3.0

F04

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0

Prestroke mm : 3.60
Tolerance mm : ± 0.05
Check
tolerance mm : ± 0.10

Rack travel in mm : 10.50
Tolerance mm : ± 1.50

Firing order : 1- 5- 3- 6- 2-
: 4

Phasing : 0-60-120-180-240
: -300
Tolerance : ± 0.30
Check
tolerance °NW : ± 0.50

Start of delivery blocking

Check
tolerance °NW : ± 0.30

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 11.65
Tolerance mm : ± 0.10

Del. quantity
cm³/1000 strokes : 157.5

Tolerance
 cm³/1000 strokes : +- 1.0

 Check tolerance
 cm³/1000S. : +- 4.0

 Spread
 Tolerance
 cm³/1000 strokes : 5.0

 Check tolerance
 cm³/1000S. : 9.0

 Rated speed rpm : 650

 Rack travel in mm : 4.80
 Tolerance mm : +- 0.20
 Del. quantity
 cm³/1000 strokes : 21.0
 Tolerance
 cm³/1000 strokes : +- 3.0
 Check tolerance
 cm³/1000S. : +- 6.0
 Spread
 Tolerance
 cm³/1000 strokes : 8.0
 Check tolerance
 cm³/1000S. : 12.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800

 Rack travel in mm : 0.50
 Tolerance mm : +- 0.20

 governor spring
 pre-tension
 click setting x : 3.00

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1250
 Aneroid pressure
 hPa : 1000
 Del. quantity
 cm³/1000 strokes : 157.5
 Tolerance
 cm³/1000 strokes : +- 1.0
 Check tolerance
 cm³/1000S. : +- 4.0
 Spread

Tolerance
 cm³/1000 strokes : 5.0
 Check tolerance
 cm³/1000S. : 9.0

CONTROL LEVER

control lever
 position degree : 109.0
 tolerance degree : +- 4.0

RATED SPEED

Rated speed rpm : 1330

ASSEMBLY GOVERNOR SETTING

Rated speed rpm : 1293
 rack travel mm : 10.65

Rated speed rpm : 1325
 Tolerance 1/min : +- 5
 rack travel mm : 4.00

rack travel mm : 0.85
 Tolerance mm : +- 0.55
 Rated speed rpm : 1500

Rated speed rpm : 1294
 rack travel mm : 10.65

Rated speed rpm : 1326
 Tolerance 1/min : +- 5
 rack travel mm : 4.00

rack travel mm : 0.85
 Tolerance mm : +- 0.55

Rated speed rpm : 1295
 rack travel mm : 10.65

Rated speed rpm : 1327
 Tolerance 1/min : +- 5
 rack travel mm : 4.00

rack travel mm : 0.85
 Tolerance mm : +- 0.55

Rated speed rpm : 1296
 rack travel mm : 10.65

Rated speed rpm : 1328
 Tolerance 1/min : +- 5
 rack travel mm : 4.00

rack travel mm : 0.85
 Tolerance mm : +- 0.55

Rated speed rpm : 1297
rack travel mm : 10.65

Rated speed rpm : 1329
Tolerance 1/min : +- 5
rack travel mm : 4.00

rack travel mm : 0.85
Tolerance mm : +- 0.55

Rated speed rpm : 1298
rack travel mm : 10.65

Rated speed rpm : 1330
Tolerance 1/min : +- 5
rack travel mm : 4.00

rack travel mm : 0.85
Tolerance mm : +- 0.55

LOW IDLE

control lever
position degree : 79.0
tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 650
rack travel mm : 4.30

Testing:

Rated speed rpm : 650
rack travel mm : 4.80
Tolerance mm : +- 0.10

rack travel mm : 2.00
Rated speed rpm : 770
Tolerance 1/min : +- 50

TORQUE CONTROL

Rated speed rpm : 1250
rack travel mm : 11.65
Tolerance mm : +- 0.10

Rated speed rpm : 900
rack travel mm : 12.10
Tolerance mm : +- 0.10

Rated speed rpm : 700
rack travel mm : 12.15
Tolerance mm : +- 0.15

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1000
rack travel mm : 12.10
Tolerance mm : +- 0.10

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 500
rack travel mm : 7.90
Tolerance mm : +- 0.10

Rated speed rpm : 500

Pressure hPa : 490
rack travel mm : 11.05
Tolerance mm : +- 0.05

START CUT-OUT

Rated speed rpm : > 100

Check
speed 1/min : > 80

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 1000
Rated speed rpm : 900
Del. quantity
cm³/1000 strokes : 176.0
Tolerance
cm³/1000 strokes : +- 3.0
Check tolerance
cm³/1000S. : +- 6.0

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 84.5
Tolerance
cm³/1000 strokes : +- 1.0
Check tolerance
cm³/1000S. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.50
Tolerance mm : \pm 0.50
Del. quantity
cm³/1000 strokes : 210.0
Tolerance
cm³/1000 strokes : \pm 15.0
Check tolerance
cm³/1000s. : \pm 19.0

LOW IDLE

Rated speed rpm : 650
rack travel mm : 4.80
Tolerance mm : \pm 0.20
Del. quantity
cm³/1000 strokes : 21.0
Tolerance
cm³/1000 strokes : \pm 3.0
Check tolerance
cm³/1000s. : \pm 6.0
Spreed
Tolerance
cm³/1000 strokes : 8.0
Check tolerance
cm³/1000s. : 12.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 26.10.95
Test oil : ISO 4113

Combination No. : 0 402 610 802

Injection pump
Pump designation : PE12P120A500/6LS7866
EP type number : 0 412 620 836

Governor
Governor design. :
Governor no. :

Cust. part No. : 0240742902

Customer-spec. information
Customer : MTU
Motor : 12V183-02

TEST BENCH REQUIREMENTS

Inlet line : 3.1,3.2

Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Overflow quantity
min. l/h : 110
Tolerance l/h : ± 10.0

Test nozzle holder
assembly : 1 688 901 105

Opening pressure
bar : 208.5
Tolerance bar : ± 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0
x inside diameter : 3.0
x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0

Prestroke mm : 4.45
Tolerance mm : ± 0.05
Check
tolerance mm : ± 0.10

Rack travel in mm : 20.50
Tolerance mm : ± 0.50

Firing order : 12- 1- 5- 9- 8
: - 3- 4- 11- 10
: - 2- 6- 7

Phasing : 0-45-60-105-120
: -165-180-225-240
: -285-300-345

Tolerance : ± 0.30
Check
tolerance °NW : ± 0.50

Start of delivery mark

Barrel no. : 12

BASIC SETTING

Rated speed rpm : 750

Rack travel in mm : 10.45
Tolerance mm : ± 0.05

Del. quantity
cm³/1000 strokes : 184.0

Tolerance
cm³/1000 strokes : ± 1.0

Check tolerance
cm³/1000S. : ± 4.0

Spreed
Tolerance
cm³/1000 strokes : 8.0

Check tolerance
cm³/1000S. : 11.0

Rated speed rpm : 300

Rack travel in mm : 6.00
Tolerance mm : ± 0.20

Del. quantity
cm³/1000 strokes : 18.0

Tolerance
cm³/1000 strokes : ± 3.0

Check tolerance
cm³/1000S. : ± 6.1

Spreed
Tolerance
cm³/1000 strokes : 10.0

Check tolerance
cm³/1000S. : 14.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

FULL LOAD DELIVERY AT FULL LOAD STOP

Aneroid pressure
hPa : -

Del. quantity
cm³/1000 strokes : 184.0

Tolerance
cm³/1000 strokes : ± 1.0

Check tolerance
cm³/1000S. : ± 4.0

Spreed
Tolerance
cm³/1000 strokes : 8.0

Check tolerance
cm³/1000S. : 11.0

TORQUE CONTROL

Rated speed rpm : 750
rack travel mm : 10.45

Tolerance mm : ± 0.05

LOW IDLE

Rated speed rpm : 300

rack travel mm : 6.00

Tolerance mm : ± 0.20

Del. quantity

cm³/1000 strokes : 18.0

Tolerance

cm³/1000 strokes : ± 3.0

Check tolerance

cm³/1000S. : ± 6.1

Spreed

Tolerance

cm³/1000 strokes : 10.0

Check tolerance

cm³/1000S. : 14.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 08.01.96
Test oil : ISO 4113

Combination No. : 0 402 640 812

Injection pump
Pump designation : PE12P120A520LS7820
EP type number : 0 412 620 814

Governor
Governor design. : RQV350...1150PA870
: -4
Governor no. : 0 421 813 717

Cust. part No. : 0170742602

Customer-spec. information
Customer : MB-NFZ
Motor : OM 444 LA
Power KW : 736.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 1.5
Tolerance bar : ± 0.1

Tolerance L/h : ± 10.0

Test nozzle holder
assembly : 1 688 901 105

Opening pressure
bar : 208.5
Tolerance bar : ± 1.5

Test lines : 1 680 750 075
Outside diameter : 8.0
x inside diameter : 2.5
x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0

Prestroke mm : 4.45
Tolerance mm : ± 0.05
Check
tolerance mm : ± 0.10

Rack travel in mm : 20.00
Tolerance mm : ± 1.00

Firing order : 12- 1- 5- 9- 8
: - 3- 4- 11- 10
: - 2- 6- 7

Phasing : 0-45-60-105-120
: -165-180-225-240
: -285-300-345
Tolerance : ± 0.30
Check
tolerance °NW : ± 0.50

Start of delivery mark

Barrel no. : 12

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm : 15.30
Tolerance mm : ± 0.05

Del. quantity
cm³/1000 strokes : 306.0

<hr/>	
Tolerance	
cm3/1000 strokes	: +- 1.0
<hr/>	
Check tolerance	
cm3/1000S.	: +- 4.0
<hr/>	
Spreed	
Tolerance	
cm3/1000 strokes	: 6.0
<hr/>	
Check tolerance	
cm3/1000S.	: 10.0
<hr/>	
Rated speed rpm	: 350
<hr/>	
Rack travel in mm	: 5.60
Tolerance mm	: +- 0.30
Del. quantity	
cm3/1000 strokes	: 15.0
Tolerance	
cm3/1000 strokes	: +- 3.0
Check tolerance	
cm3/1000S.	: +- 6.0
Spreed	
Tolerance	
cm3/1000 strokes	: 8.0
Check tolerance	
cm3/1000S.	: 12.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm	: 350
guide sleeve	
travel mm	: 1.55
Tolerance mm	: +- 0.15
<hr/>	
Rated speed rpm	: 1206
guide sleeve	
travel mm	: 8.15
Tolerance mm	: +- 0.20
<hr/>	
Rated speed rpm	: 600
guide sleeve	
travel mm	: 3.55
Tolerance mm	: +- 0.25
<hr/>	
Rated speed rpm	: 960
guide sleeve	
travel mm	: 5.55
Tolerance mm	: +- 0.25
<hr/>	
Rated speed rpm	: 1291
guide sleeve	
travel mm	: 10.05

Tolerance mm : +- 0.25

GUIDE SLEEVE POSITION

Rated speed rpm	: 1275
<hr/>	
Rack travel in mm	: 16.50
Tolerance mm	: +- 1.30

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm	: 1150
Aneroid pressure	
hPa	: 1300
Del. quantity	
cm3/1000 strokes	: 306.0
Tolerance	
cm3/1000 strokes	: +- 1.0
Check tolerance	
cm3/1000S.	: +- 4.0
Spreed	
Tolerance	
cm3/1000 strokes	: 6.0
Check tolerance	
cm3/1000S.	: 10.0

CONTROL LEVER

control lever	
position degree	: 117.0
tolerance degree	: +- 4.0

RATED SPEED

rack travel mm	: 14.30
Rated speed rpm	: 1195
Tolerance 1/min	: +- 5
<hr/>	
rack travel mm	: 4.00
Rated speed rpm	: 1285
Tolerance 1/min	: +- 15
<hr/>	
rack travel mm	: 0.50
Tolerance mm	: +- 0.50
Rated speed rpm	: 1350

LOW IDLE

control lever	
position degree	: 66.0
tolerance degree	: +- 4.0

Testing:

Rated speed rpm : 350
rack travel mm : 5.60
Tolerance mm : ± 0.10

Rated speed rpm : 250
CRT mm min. : > 7.30

Rated speed rpm : 475

TORQUE CONTROL

Rated speed rpm : 1150
rack travel mm : 15.30
Tolerance mm : ± 0.05

Rated speed rpm : 750
rack travel mm : 15.40
Tolerance mm : ± 0.10

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1300
rack travel mm : 15.30
Tolerance mm : ± 0.05

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 500
rack travel mm : 8.45
Tolerance mm : ± 0.15

Rated speed rpm : 500

Pressure hPa : 300
rack travel mm : 10.20
Tolerance mm : ± 0.05

Pressure hPa : 1100
rack travel mm : 13.80
Tolerance mm : ± 0.15

START CUT-OUT

Rated speed rpm : > 200
Rated speed rpm : < 310

Check
speed 1/min : > 180

Check
speed 1/min : < 330

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 1300
Rated speed rpm : 750
Del. quantity
cm³/1000 strokes : 315.0
Tolerance
cm³/1000 strokes : ± 5.0
Check tolerance
cm³/1000S. : ± 8.0
Spreed
Tolerance
cm³/1000 strokes : 10.0
Check tolerance
cm³/1000S. : 15.0

Aneroid pressure
hPa : 1300
Rated speed rpm : 1150
Del. quantity
cm³/1000 strokes : 234.5
Tolerance
cm³/1000 strokes : ± 1.5
Check tolerance
cm³/1000S. : ± 4.5
Spreed
Tolerance
cm³/1000 strokes : 10.0
Check tolerance
cm³/1000S. : 15.0

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 124.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 4.0
Spreed
Tolerance
cm³/1000 strokes : 10.0
Check tolerance
cm³/1000S. : 15.0

BREAKAWAY

Rack travel in mm : 14.30
Rated speed rpm : 1195
Tolerance 1/min : ± 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm³/1000 strokes : 331.0
Tolerance
cm³/1000 strokes : ± 10.0
Check tolerance
cm³/1000s. : ± 14.0

LOW IDLE

Rated speed rpm : 350
rack travel mm : 5.60
Tolerance mm : ± 0.30
Del. quantity
cm³/1000 strokes : 15.0
Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000s. : ± 6.0
Spreed
Tolerance
cm³/1000 strokes : 8.0
Check tolerance
cm³/1000s. : 12.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 04.01.96
Test oil : ISO 4113

Combination No. : 0 402 746 604

Injection pump
Pump designation : PES6P120A72ORS7366
EP type number : 0 412 726 933

Governor
Governor design. : RQV275...1100PA1208
: -1K
Governor no. : 0 421 815 492

Cust. part No. :

Customer-spec. information
Customer : IVECO-FRANCE
Motor : 8460.41C-3000

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet
temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 076

Inlet press. bar : 2.5
Tolerance bar : +- 0.1

Overflow quantity
min. L/h : 160
Tolerance L/h : +- 10.0

Test nozzle holder
assembly : 1 688 901 105

Opening pressure
bar : 208.5
Tolerance bar : +- 1.5

Test lines : 1 680 750 089
Outside diameter : 8.0
x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : +- 1.0

Prestroke mm : 2.85
Tolerance mm : +- 0.05
Check
tolerance mm : +- 0.10

Rack travel in mm : 20.50
Tolerance mm : +- 0.50

Firing order : 1- 5- 3- 6- 2-
: 4

Phasing : 0-60-120-180-240
: -300
Tolerance : +- 0.30
Check
tolerance °NW : +- 0.50

Start of delivery mark

Check
tolerance °NW : +- 0.40

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 11.65
Tolerance mm : +- 0.05

Del. quantity cm ³ /1000 strokes	: 235.0
<hr/>	
Tolerance cm ³ /1000 strokes	: ± 1.0
<hr/>	
Check tolerance cm ³ /1000S.	: ± 4.0
<hr/>	
Spread Tolerance cm ³ /1000 strokes	: 5.0
<hr/>	
Check tolerance cm ³ /1000S.	: 9.0
Rated speed rpm	: 275
Rack travel in mm	: 6.40
Tolerance mm	: ± 0.20
Del. quantity cm ³ /1000 strokes	: 19.0
Tolerance cm ³ /1000 strokes	: ± 3.0
Check tolerance cm ³ /1000S.	: ± 6.0
Spread Tolerance cm ³ /1000 strokes	: 8.0
Check tolerance cm ³ /1000S.	: 12.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm	: 275
guide sleeve travel mm	: 1.70
Tolerance mm	: ± 0.20
Rated speed rpm	: 1180
guide sleeve travel mm	: 10.07
Tolerance mm	: ± 0.15
Rated speed rpm	: 802
guide sleeve travel mm	: 6.49
Tolerance mm	: ± 0.25
Rated speed rpm	: 460
guide sleeve travel mm	: 3.77
Tolerance mm	: ± 0.25
Rated speed rpm	: 1440

guide sleeve travel mm	: 13.50
Tolerance mm	: ± 0.50

GUIDE SLEEVE POSITION

Rated speed rpm	: 1295
Rack travel in mm	: 10.65
Tolerance mm	: ± 2.70

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm	: 1100
Aneroid pressure hPa	: 1200
Del. quantity cm ³ /1000 strokes	: 235.0
Tolerance cm ³ /1000 strokes	: ± 1.0
Check tolerance cm ³ /1000S.	: ± 4.0
Spread Tolerance cm ³ /1000 strokes	: 5.0
Check tolerance cm ³ /1000S.	: 9.0

CONTROL LEVER

control lever position degree	: 118.0
tolerance degree	: ± 4.0

RATED SPEED

rack travel mm	: 10.60
Rated speed rpm	: 1145
Tolerance 1/min	: ± 5
rack travel mm	: 4.00
Rated speed rpm	: 1245
Tolerance 1/min	: ± 15
rack travel mm	: 0.50
Tolerance mm	: ± 0.50
Rated speed rpm	: 1350

LOW IDLE

control lever position degree	: 75.0
tolerance degree	: ± 4.0

Testing:

Rated speed rpm : 275
rack travel mm : 6.40
Tolerance mm : + 0.10

Rated speed rpm : 175
CRT mm min. : > 7.90

Rated speed rpm : 315

TORQUE CONTROL

Rated speed rpm : 1100
rack travel mm : 11.65
Tolerance mm : + 0.05

Rated speed rpm : 800
rack travel mm : 11.40
Tolerance mm : + 0.10

Rated speed rpm : 550
rack travel mm : 11.30
Tolerance mm : + 0.10

Rated speed rpm : 500
rack travel mm : 11.30
Tolerance mm : + 0.20

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 1100
Pressure hPa : 1200
rack travel mm : 11.65
Tolerance mm : + 0.05

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 1100
rack travel mm : 9.30
Tolerance mm : + 0.20

Rated speed rpm : 1100

Pressure hPa : 230
rack travel mm : 9.95
Tolerance mm : + 0.20

Pressure hPa : 360
rack travel mm : 11.15
Tolerance mm : + 0.05

START CUT-OUT

Rated speed rpm : > 180
Rated speed rpm : < 220

Check speed 1/min : > 160
Check speed 1/min : < 240

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure hPa : 1200
Rated speed rpm : 800
Del. quantity cm³/1000 strokes : 215.0
Tolerance cm³/1000 strokes : + 3.0
Check tolerance cm³/1000s. : + 6.0

Aneroid pressure hPa : 1200
Rated speed rpm : 550
Del. quantity cm³/1000 strokes : 202.0
Tolerance cm³/1000 strokes : + 3.0
Check tolerance cm³/1000s. : + 6.0

Aneroid pressure hPa : -
Rated speed rpm : 550
Del. quantity cm³/1000 strokes : 138.5
Tolerance cm³/1000 strokes : + 1.0
Check tolerance cm³/1000s. : + 4.0

BREAKAWAY

Rack travel in mm : 10.60
Rated speed rpm : 1145
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 11.90
Tolerance mm : + 0.50

Del. quantity
cm³/1000 strokes : 115.0
Tolerance
cm³/1000 strokes : ± 15.0
Check tolerance
cm³/1000S. : ± 19.0

LOW IDLE

Rated speed rpm : 275
rack travel mm : 6.40
Tolerance mm : ± 0.20
Del. quantity
cm³/1000 strokes : 19.0
Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 6.0
Spread
Tolerance
cm³/1000 strokes : 8.0
Check tolerance
cm³/1000S. : 12.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 10.01.96
Test oil : ISO 4113
Combination No. : 0 403 466 176
Injection pump
Pump designation : PES6MW100/120RS1240
EP type number : 0 413 406 239
Governor
Governor design. : RSV400...1000MW2A396
Governor no. : 0 420 085 284
Cust. part No. : 3929174

Customer-spec. information
Customer : CDC
Motor : 6 CT-830
Power KW : 160.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet temp. °C : 40
Tolerance °C : ± 2.0
Overflow valve : 1 417 413 047
Inlet press. bar : 1.5
Test nozzle holder assembly : 1 688 901 101
Opening pressure bar : 208.5
Tolerance bar : ± 1.5
Test lines : 1 680 750 014
Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0
Tolerance bar : ± 1.0
Prestroke mm : 3.35
Tolerance mm : ± 0.05
Check tolerance mm : ± 0.10
Rack travel in mm : 10.50
Tolerance mm : ± 1.50
Firing order : 1- 5- 3- 6- 2-
: 4
Phasing : 0-60-120-180-240
: -300
Tolerance : ± 0.50
Check tolerance °NW : ± 0.75
Start of delivery blocking
°NW after s.o.d. : 8.00
Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000
Rack travel in mm : 12.40
Tolerance mm : ± 0.05
Del. quantity cm³/1000 strokes : 146.0
Tolerance cm³/1000 strokes : ± 1.0

Check tolerance	
cm ³ /1000S.	: +- 4.0
<hr/>	
Spreed	
Tolerance	
cm ³ /1000 strokes	: 4.0
<hr/>	
Check tolerance	
cm ³ /1000S.	: 7.5
<hr/>	
Rated speed rpm	: 400
<hr/>	
Rack travel in mm	: 5.60
Tolerance mm	: +- 0.30
Del. quantity	
cm ³ /1000 strokes	: 20.0
Tolerance	
cm ³ /1000 strokes	: +- 2.0
Check tolerance	
cm ³ /1000S.	: +- 4.5
Spreed	
Tolerance	
cm ³ /1000 strokes	: 3.5
Check tolerance	
cm ³ /1000S.	: 5.5

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm	: 800
<hr/>	
Rack travel in mm	: 0.65
Tolerance mm	: +- 0.35
<hr/>	
governor spring	
pre-tension	
click setting x	: 2.00

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm	: 1000
Aneroid pressure	
hPa	: 1200
Del. quantity	
cm ³ /1000 strokes	: 146.0
Tolerance	
cm ³ /1000 strokes	: +- 1.0
Check tolerance	
cm ³ /1000S.	: +- 4.0
Spreed	
Tolerance	
cm ³ /1000 strokes	: 4.0

Check tolerance	
cm ³ /1000S.	: 7.5

CONTROL LEVER

control lever	
position degree	: 92.0
tolerance degree	: +- 4.0

RATED SPEED

rack travel mm	: 11.40
Rated speed rpm	: 1045
Tolerance 1/min	: +- 5

rack travel mm	: 4.00
Rated speed rpm	: 1125
Tolerance 1/min	: +- 15

rack travel mm	: 0.85
Tolerance mm	: +- 0.55
Rated speed rpm	: 1300

rack travel mm	: 4.00
Rated speed rpm	: 1135

LOW IDLE

control lever	
position degree	: 76.0
tolerance degree	: +- 4.0

Setting point w/out bumper spring

Rated speed rpm	: 400
rack travel mm	: 5.10

Testing:

Rated speed rpm	: 400
rack travel mm	: 5.60
Tolerance mm	: +- 0.30

TORQUE CONTROL

Rated speed rpm	: 1000
rack travel mm	: 12.40
Tolerance mm	: +- 0.05

Rated speed rpm	: 750
rack travel mm	: 12.40
Tolerance mm	: +- 0.10

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1200
rack travel mm : 12.40
Tolerance mm : ± 0.10

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 500
rack travel mm : 10.80
Tolerance mm : ± 0.05

Rated speed rpm : 500

Pressure hPa : 750
rack travel mm : 11.80
Tolerance mm : ± 0.15

Pressure hPa : 600
rack travel mm : 11.10
Tolerance mm : ± 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 1200
Rated speed rpm : 750
Del. quantity
cm³/1000 strokes : 149.0
Tolerance
cm³/1000 strokes : ± 2.0
Check tolerance
cm³/1000S. : ± 5.0
Spreed
Tolerance
cm³/1000 strokes : 6.0
Check tolerance
cm³/1000S. : 9.0

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 118.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 4.0

BREAKAWAY

Rack travel in mm : 11.40
Rated speed rpm : 1045
Tolerance 1/min : ± 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.00
Tolerance mm : ± 1.00
Del. quantity
cm³/1000 strokes : 145.0
Tolerance
cm³/1000 strokes : ± 10.0
Check tolerance
cm³/1000S. : ± 13.0

LOW IDLE

Rated speed rpm : 400
rack travel mm : 5.60
Tolerance mm : ± 0.30
Del. quantity
cm³/1000 strokes : 20.0
Tolerance
cm³/1000 strokes : ± 2.0
Check tolerance
cm³/1000S. : ± 4.5
Spreed
Tolerance
cm³/1000 strokes : 3.5
Check tolerance
cm³/1000S. : 5.5

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 09.01.96
Test oil : ISO 4113
Combination No. : 0 403 474 025
Injection pump
Pump designation : PES4MW100/720RS1235
EP type number : 0 413 404 121
Governor
Governor design. : RSV350...1200MWOA346
: -3
Governor no. : 0 420 085 179
Cust. part No. : 0260740602

Customer-spec. information
Customer : MB-NFZ
Motor : OM 364 A
Power KW : 77.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet
temp. °C : 40
Tolerance °C : +- 2.0
Overflow valve : 1 419 992 198
Inlet press. bar : 1.5
Test nozzle holder
assembly : 1 688 901 101
Opening pressure
bar : 208.5
Tolerance bar : +- 1.5
Test Lines : 1 680 750 089
Outside diameter : 8.0

F21

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0
Tolerance bar : +- 1.0

Prestroke mm : 3.75
Tolerance mm : +- 0.05
Check
tolerance mm : +- 0.10

Rack travel in mm : 10.50
Tolerance mm : +- 1.50

Firing order : 1- 3- 4- 2

Phasing : 0-90-180-270
Tolerance : +- 0.50
Check
tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm : 13.20
Tolerance mm : +- 0.05

Del. quantity
cm³/1000 strokes : 88.0

Tolerance
cm³/1000 strokes : +- 1.0

Check tolerance
cm³/1000S. : +- 3.0

Speed
Tolerance
cm³/1000 strokes : 3.5

Check tolerance
 cm³/1000S. : 6.0
 Rated speed rpm : 350
 Rack travel in mm : 7.00
 Tolerance mm : ± 0.40
 Del. quantity
 cm³/1000 strokes : 12.0
 Tolerance
 cm³/1000 strokes : ± 2.0
 Check tolerance
 cm³/1000S. : ± 4.5
 Spreed
 Tolerance
 cm³/1000 strokes : 3.5
 Check tolerance
 cm³/1000S. : 5.5

(B) SETTING OF INJECTION PUMP
 WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800
 Rack travel in mm : 0.65
 Tolerance mm : ± 0.35
 governor spring
 pre-tension
 click setting x : 5.80

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1200
 Aneroid pressure
 hPa : 700
 Del. quantity
 cm³/1000 strokes : 88.0
 Tolerance
 cm³/1000 strokes : ± 1.0
 Check tolerance
 cm³/1000S. : ± 3.0
 Spreed
 Tolerance
 cm³/1000 strokes : 3.5
 Check tolerance
 cm³/1000S. : 6.0

CONTROL LEVER

control lever
 position degree : 102.0

tolerance degree : ± 4.0

RATED SPEED

rack travel mm : 1.00
 Tolerance mm : ± 0.70
 Rated speed rpm : 1450

rack travel mm : 4.00
 Rated speed rpm : 1335

rack travel mm : 12.20
 Rated speed rpm : 1245
 Tolerance 1/min : ± 8

ASSEMBLY GOVERNOR SETTING

Rated speed rpm : 1240
 rack travel mm : 12.20

Rated speed rpm : 1289
 Tolerance 1/min : ± 4
 rack travel mm : 4.00

Rated speed rpm : 1241
 rack travel mm : 12.20

Rated speed rpm : 1290
 Tolerance 1/min : ± 4
 rack travel mm : 4.00

Rated speed rpm : 1242
 rack travel mm : 12.20

Rated speed rpm : 1291
 Tolerance 1/min : ± 4
 rack travel mm : 4.00

Rated speed rpm : 1243
 rack travel mm : 12.20

Rated speed rpm : 1292
 Tolerance 1/min : ± 4
 rack travel mm : 4.00

Rated speed rpm : 1244
 rack travel mm : 12.20

Rated speed rpm : 1293
 Tolerance 1/min : ± 4
 rack travel mm : 4.00

Rated speed rpm : 1245
 rack travel mm : 12.20

Rated speed rpm : 1294
 Tolerance 1/min : ± 4
 rack travel mm : 4.00

LOW IDLE

Testing:

Rated speed rpm : 350
rack travel mm : 7.00
Tolerance mm : + 0.40

Rated speed rpm : 100

CRT mm min. : > 19.00

TORQUE CONTROL

Rated speed rpm : 1200
rack travel mm : 13.20
Tolerance mm : + 0.05

Rated speed rpm : 600
rack travel mm : 14.00
Tolerance mm : + 0.10

Rated speed rpm : 1000
rack travel mm : 13.60
Tolerance mm : + 0.10

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 700
rack travel mm : 14.00
Tolerance mm : + 0.10

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 500
Tolerance mm : + 0.10

Rated speed rpm : 500

Pressure hPa : 375
rack travel mm : 1.45
Tolerance mm : + 0.15

Pressure hPa : 200
rack travel mm : 0.50
Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 700
Rated speed rpm : 600
Del. quantity
cm³/1000 strokes : 87.0
Tolerance
cm³/1000 strokes : + 1.5
Check tolerance
cm³/1000S. : + 4.0
Spreed
Tolerance
cm³/1000 strokes : 5.0
Check tolerance
cm³/1000S. : 7.0

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 50.0
Tolerance
cm³/1000 strokes : + 1.0
Check tolerance
cm³/1000S. : + 3.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm³/1000 strokes : 80.0
Tolerance
cm³/1000 strokes : + 5.0
Check tolerance
cm³/1000S. : + 8.0

LOW IDLE

Rated speed rpm : 350
rack travel mm : 7.00
Tolerance mm : + 0.40
Del. quantity
cm³/1000 strokes : 12.0
Tolerance
cm³/1000 strokes : + 2.0
Check tolerance
cm³/1000S. : + 4.5
Spreed
Tolerance
cm³/1000 strokes : 3.5

Check tolerance
cm³/1000s. : 5.5

End of test specification sheet



BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 12.01.96
Test oil : ISO 4113
Combination No. : 0 401 876 808

Injection pump
Pump designation : PE6P120A32ORS3355
EP type number : 0 411 826 814

Governor
Governor design. : RSV300...1100P1A604
Governor no. : 0 421 833 485

Cust. part No. : 3825516 P03 v. 11/95

Customer-spec. information
Customer : PENTA
Motor : TD1030ME
Power KW : 190.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Overflow quantity min. L/h : 85
Tolerance L/h : + 10.0

Test nozzle holder assembly : 1 688 901 101

Opening pressure bar : 208.5
Tolerance bar : + 1.5

Test lines : 1 680 750 008
Outside diameter : 6.0
x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : + 1.0

Prestroke mm : 3.45
Tolerance mm : + 0.05
Check tolerance mm : + 0.10

Rack travel in mm : 9.90
Tolerance mm : + 0.50

Firing order : 1- 5- 3- 6- 2-
: 4

Phasing : 0-60-120-180-240
: -300
Tolerance : + 0.30
Check tolerance °NW : + 0.50

Start of delivery mark
Tolerance : + 0.50
Check tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 12.50
Tolerance mm : + 0.05

<hr/>	
Del. quantity	
cm ³ /1000 strokes :	156.0
<hr/>	
Tolerance	
cm ³ /1000 strokes :	+ 1.0
<hr/>	
Check tolerance	
cm ³ /1000S.	: + 4.0
<hr/>	
Spreed	
Tolerance	
cm ³ /1000 strokes :	7.0
<hr/>	
Check tolerance	
cm ³ /1000S.	: 11.0
<hr/>	
Rated speed rpm	: 300
<hr/>	
Rack travel in mm	: 4.70
Tolerance mm	: + 0.20
Del. quantity	
cm ³ /1000 strokes :	23.0
Tolerance	
cm ³ /1000 strokes :	+ 2.5
Check tolerance	
cm ³ /1000S.	: + 5.0
Spreed	
Tolerance	
cm ³ /1000 strokes :	3.0
Check tolerance	
cm ³ /1000S.	: 6.0

(B) SETTING OF INJECTION PUMP WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm	: 800
<hr/>	
Rack travel in mm	: 0.85
Tolerance mm	: + 0.55
<hr/>	
governor spring	
pre-tension	
click setting x	: 4.75

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm	: 1100
Aneroid pressure	
hPa	: 1500
Del. quantity	
cm ³ /1000 strokes :	156.0
Tolerance	
cm ³ /1000 strokes :	+ 1.0

Check tolerance	
cm ³ /1000S.	: + 4.0
Spreed	
Tolerance	
cm ³ /1000 strokes :	7.0
Check tolerance	
cm ³ /1000S.	: 11.0

CONTROL LEVER

control lever	
position degree	: 62.0
tolerance degree	: + 4.0
<hr/>	
control lever	
position degree	: 112.0
tolerance degree	: + 4.0

RATED SPEED

rack travel mm	: 11.50
Rated speed rpm	: 1135
Tolerance 1/min	: + 5
<hr/>	
rack travel mm	: 4.00
Rated speed rpm	: 1190
Tolerance 1/min	: + 15
<hr/>	
rack travel mm	: 0.85
Tolerance mm	: + 0.55
Rated speed rpm	: 1300
<hr/>	
rack travel mm	: 4.00
Rated speed rpm	: 1195

LOW IDLE

control lever	
position degree	: 76.0
tolerance degree	: + 4.0
<hr/>	
control lever	
position degree	: 26.0
tolerance degree	: + 4.0

Setting point w/out bumper spring

Rated speed rpm	: 300
rack travel mm	: 4.20
<hr/>	
Testing:	
Rated speed rpm	: 300
rack travel mm	: 4.70
Tolerance mm	: + 0.10

rack travel mm : 2.00
Rated speed rpm : 380
Tolerance 1/min : +- 30

TORQUE CONTROL

Rated speed rpm : 1100
rack travel mm : 12.50
Tolerance mm : +- 0.05

Rated speed rpm : 700
rack travel mm : 12.50
Tolerance mm : +- 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1500
rack travel mm : 12.50
Tolerance mm : +- 0.05

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 500
rack travel mm : 9.55
Tolerance mm : +- 0.10

Rated speed rpm : 500

Pressure hPa : 555
rack travel mm : 2.30
Tolerance mm : +- 0.15

Pressure hPa : 140
rack travel mm : 0.25
Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 1500
Rated speed rpm : 700
Del. quantity
cm³/1000 strokes : 178.0
Tolerance
cm³/1000 strokes : +- 3.0
Check tolerance
cm³/1000S. : +- 6.0
Spread

Tolerance
cm³/1000 strokes : 7.0
Check tolerance
cm³/1000S. : 11.0

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 127.0
Tolerance
cm³/1000 strokes : +- 1.0
Check tolerance
cm³/1000S. : +- 4.0

BREAKAWAY

Rack travel in mm : 11.50
Rated speed rpm : 1135
Tolerance 1/min : +- 5

LOW IDLE

Rated speed rpm : 300
rack travel mm : 4.70
Tolerance mm : +- 0.20
Del. quantity
cm³/1000 strokes : 23.0
Tolerance
cm³/1000 strokes : +- 2.5
Check tolerance
cm³/1000S. : +- 5.0
Spread
Tolerance
cm³/1000 strokes : 3.0
Check tolerance
cm³/1000S. : 6.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 10.01.96
Test oil : ISO 4113

Combination No. : 0 401 876 813

Injection pump
Pump designation : PE6P110A320RS3364
EP type number : 0 411 816 798

Governor
Governor design. : RSV300...900P1A624
Governor no. : 0 421 833 535

Cust. part No. : 11030179
: -P02 v.12/95

Customer-spec. information
Customer : VME
Motor : TD 63 KEE
Power KW : 105.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration damper
(RoBo diaphragm) : 4.2

Test oil inlet temp. °C : 40
Tolerance °C : ± 2.0

Overflow valve : 2 417 413 046

Inlet press. bar : 1.5
Tolerance bar : ± 0.1

Test nozzle holder assembly : 1 688 901 101

Opening pressure bar : 208.5
Tolerance bar : ± 1.5

F28

Test lines : 1 680 750 008

Outside diameter : 6.0
x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0

Prestroke mm : 2.45
Tolerance mm : ± 0.05
Check tolerance mm : ± 0.10

Rack travel in mm : 10.50
Tolerance mm : ± 1.50

Firing order : 1- 5- 3- 6- 2-
: 4

Phasing : 0-60-120-180-240
: -300
Tolerance : ± 0.30
Check tolerance °NW : ± 0.75

Start of delivery mark
Barrel no. : 1

BASIC SETTING

Rated speed rpm : 550

Rack travel in mm : 11.60
Tolerance mm : ± 0.05

Del. quantity cm³/1000 strokes : 145.0

<hr/>	
Tolerance	
cm ³ /1000 strokes	: +- 1.0
<hr/>	
Check tolerance	
cm ³ /1000S.	: +- 3.0
<hr/>	
Spreed	
Tolerance	
cm ³ /1000 strokes	: 4.0
<hr/>	
Check tolerance	
cm ³ /1000S.	: 7.5
<hr/>	
Rated speed rpm	: 300
<hr/>	
Rack travel in mm	: 4.80
Tolerance mm	: +- 0.20
Del. quantity	
cm ³ /1000 strokes	: 26.0
Tolerance	
cm ³ /1000 strokes	: +- 2.0
Check tolerance	
cm ³ /1000S.	: +- 4.5
Spreed	
Tolerance	
cm ³ /1000 strokes	: 3.0
Check tolerance	
cm ³ /1000S.	: 6.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm	: 800
<hr/>	
Rack travel in mm	: 0.50
Tolerance mm	: +- 0.20
<hr/>	
governor spring	
pre-tension	
click setting x	: 5.25

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm	: 550
Aneroid pressure	
hPa	: 1500
Del. quantity	
cm ³ /1000 strokes	: 145.0
Tolerance	
cm ³ /1000 strokes	: +- 1.0
Check tolerance	
cm ³ /1000S.	: +- 3.0
Spreed	

Tolerance	
cm ³ /1000 strokes	: 4.0
Check tolerance	
cm ³ /1000S.	: 7.5

CONTROL LEVER

control lever	
position degree	: 51.0
tolerance degree	: +- 4.0

control lever	
position degree	: 101.0
tolerance degree	: +- 4.0

RATED SPEED

rack travel mm	: 10.20
Rated speed rpm	: 930
Tolerance 1/min	: +- 5

rack travel mm	: 4.00
Rated speed rpm	: 990
Tolerance 1/min	: +- 15

rack travel mm	: 0.85
Tolerance mm	: +- 0.55
Rated speed rpm	: 1150

LOW IDLE

control lever	
position degree	: 76.0
tolerance degree	: +- 4.0

control lever	
position degree	: 26.0
tolerance degree	: +- 4.0

Setting point w/out bumper spring

Rated speed rpm	: 300
rack travel mm	: 4.30

Testing:

Rated speed rpm	: 300
rack travel mm	: 4.80
Tolerance mm	: +- 0.10

rack travel mm	: 2.00
Rated speed rpm	: 450
Tolerance 1/min	: +- 30

TORQUE CONTROL

Rated speed rpm : 550
rack travel mm : 11.60
Tolerance mm : +- 0.05

Rated speed rpm : 900
rack travel mm : 11.20
Tolerance mm : +- 0.10

Rated speed rpm : 765
rack travel mm : 11.50
Tolerance mm : +- 0.10

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 550
Pressure hPa : 1500
rack travel mm : 11.60
Tolerance mm : +- 0.05

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 550
rack travel mm : 9.00
Tolerance mm : +- 0.10

Rated speed rpm : 550

Pressure hPa : 620
rack travel mm : 2.30
Tolerance mm : +- 0.20

Pressure hPa : 90
rack travel mm : 0.25
Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 1500
Rated speed rpm : 900
Del. quantity
cm³/1000 strokes : 133.0
Tolerance
cm³/1000 strokes : +- 1.0
Check tolerance
cm³/1000S. : +- 3.0
Spreed

Tolerance
cm³/1000 strokes : 6.0
Check tolerance
cm³/1000S. : 10.0

Aneroid pressure
hPa : -
Rated speed rpm : 550
Del. quantity
cm³/1000 strokes : 87.0
Tolerance
cm³/1000 strokes : +- 1.0
Check tolerance
cm³/1000S. : +- 4.0

BREAKAWAY

Rack travel in mm : 10.20
Rated speed rpm : 930
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm³/1000 strokes : 103.0
Tolerance
cm³/1000 strokes : +- 10.0
Check tolerance
cm³/1000S. : +- 14.0

LOW IDLE

Rated speed rpm : 300
rack travel mm : 4.80
Tolerance mm : +- 0.20
Del. quantity
cm³/1000 strokes : 26.0
Tolerance
cm³/1000 strokes : +- 2.0
Check tolerance
cm³/1000S. : +- 4.5
Spreed
Tolerance
cm³/1000 strokes : 3.0
Check tolerance
cm³/1000S. : 6.0

End of test specification sheet



BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 17.01.96
 Test oil : ISO 4113
 Combination No. : 0 402 046 300
 Injection pump
 Pump designation : PES6P120A320RS419
 EP type number : 0 412 026 037
 Governor
 Governor design. : RQV275...1100PA495
 : -5
 Governor no. : 0 421 813 446
 Cust. part No. : CCEP 5023 E 06-09

Customer-spec. information
 Customer : RVI
 Motor : MIDR 062045
 Power KW : 191.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1
 Test oil inlet
 temp. °C : 40
 Tolerance °C : ± 2.0
 Overflow valve : 1 417 413 025
 Inlet press. bar : 1.5
 Test nozzle holder
 assembly : 1 688 901 019
 Opening pressure
 bar : 208.5
 Tolerance bar : ± 1.5
 Test lines : 1 680 750 075
 Outside diameter : 8.0

x inside diameter : 3.0
 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES
 Set equal delivery quant.
 per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
 Tolerance bar : ± 1.0
 Prestroke mm : 2.85
 Tolerance mm : ± 0.05
 Check
 tolerance mm : ± 0.10
 Rack travel in mm : 10.50
 Tolerance mm : ± 1.50
 Firing order : 1- 5- 3- 6- 2-
 : 4
 Phasing : 0-60-120-180-240
 : -300
 Tolerance : ± 0.30
 Check
 tolerance °NW : ± 0.50
 Start of delivery mark
 °NW after s.o.d. : 10.50
 Tolerance : ± 0.50
 Check
 tolerance °NW : ± 0.75
 Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100
 Rack travel in mm : 9.05
 Tolerance mm : ± 0.05
 Del. quantity
 cm³/1000 strokes : 163.0

Tolerance
cm³/1000 strokes : + 1.0

Check tolerance
cm³/1000S. : + 4.0

Spread
Tolerance
cm³/1000 strokes : 5.0

Check tolerance
cm³/1000S. : 9.0

Rated speed rpm : 275

Rack travel in mm : -4.10
Tolerance mm : + 0.20

Del. quantity
cm³/1000 strokes : 24.0

Tolerance
cm³/1000 strokes : + 3.0

Check tolerance
cm³/1000S. : + 6.0

Spread
Tolerance
cm³/1000 strokes : 8.0

Check tolerance
cm³/1000S. : 12.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm : 250
guide sleeve
travel mm : 1.10
Tolerance mm : + 0.10

Rated speed rpm : 1100
guide sleeve
travel mm : 8.10
Tolerance mm : + 0.10

Rated speed rpm : 450
guide sleeve
travel mm : 3.60
Tolerance mm : + 0.20

Rated speed rpm : 850
guide sleeve
travel mm : 6.20
Tolerance mm : + 0.10

GUIDE SLEEVE POSITION

G05

Rated speed rpm : 1150

Rack travel in mm : 16.50
Tolerance mm : + 1.30

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1100
Aneroid pressure

hPa : 700

Del. quantity
cm³/1000 strokes : 163.0

Tolerance
cm³/1000 strokes : + 1.0

Check tolerance
cm³/1000S. : + 4.0

Spread
Tolerance
cm³/1000 strokes : 5.0

Check tolerance
cm³/1000S. : 9.0

CONTROL LEVER

control lever
position degree : 64.0
tolerance degree : + 4.0

control lever
position degree : 124.0
tolerance degree : + 4.0

RATED SPEED

rack travel mm : -1.00
Rated speed rpm : 1175
Tolerance 1/min : + 5

rack travel mm : -5.00
Rated speed rpm : 1240
Tolerance 1/min : + 15

rack travel mm : -8.55
Tolerance mm : + 0.50
Rated speed rpm : 1350

LOW IDLE

control lever
position degree : 68.0
tolerance degree : + 4.0

control lever
position degree : 9.0

tolerance degree : + 4.0

Testing:

Rated speed rpm : 275
rack travel mm : -4.10
Tolerance mm : + 0.10

Rated speed rpm : 200

CRT mm max. : < -2.40

Rated speed rpm : 343

TORQUE CONTROL

Rated speed rpm : 1100

Rated speed rpm : 700

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 700

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 500
rack travel mm : -1.10
Tolerance mm : + 0.20

Rated speed rpm : 500

Pressure hPa : 195
rack travel mm : -0.80
Tolerance mm : + 0.10

Pressure hPa : 220
rack travel mm : -0.35
Tolerance mm : + 0.05

START CUT-OUT

Rated speed rpm : > 100
Rated speed rpm : < 195

Check
speed 1/min : > 80
Check
speed 1/min : < 215

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 700
Rated speed rpm : 700
Del. quantity
cm³/1000 strokes : 153.0
Tolerance
cm³/1000 strokes : + 3.0
Check tolerance
cm³/1000S. : + 6.0

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 103.0
Tolerance
cm³/1000 strokes : + 1.0
Check tolerance
cm³/1000S. : + 4.0

BREAKAWAY

Rack travel in mm : -1.00
Rated speed rpm : 1175
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm³/1000 strokes : 150.0
Tolerance
cm³/1000 strokes : + 10.0
Check tolerance
cm³/1000S. : + 14.0

LOW IDLE

Rated speed rpm : 275
rack travel mm : -4.10
Tolerance mm : + 0.20
Del. quantity
cm³/1000 strokes : 24.0
Tolerance
cm³/1000 strokes : + 3.0
Check tolerance
cm³/1000S. : + 6.0
Speed

Tolerance
cm³/1000 strokes : 8.0
Check tolerance
cm³/1000S. : 12.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 15.01.96
Test oil : ISO 4113

Combination No. : 0 402 046 824

Injection pump
Pump designation : PES6P120A320RS3279
: -1
EP type number : 0 412 026 758

Governor
Governor design. : RQ275/1050PA999-5
Governor no. : 0 421 801 663

Cust. part No. : CCEP-5112B 66-175

Customer-spec. information

Customer : RVI
Motor : MIHR 062045 A/3
Power KW : 186.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5
Tolerance bar : ± 0.1

Test nozzle holde
assembly : 1 688 901 105

Opening pressure
bar : 208.5
Tolerance bar : ± 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0
x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0

Prestroke mm : 3.55
Tolerance mm : ± 0.05
Check
tolerance mm : ± 0.10

Rack travel in mm : 10.50
Tolerance mm : ± 1.50

Firing order : 1- 5- 3- 6- 2-
: 4

Phasing : 0-60-120-180-240
: -300
Tolerance : ± 0.30
Check
tolerance °NW : ± 0.50

Start of delivery mark

Barrel no. : 1

Beginning of delivery differende
and maximum rack
travel : 10.50
Tolerance mm : ± 0.50

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 11.25
Tolerance mm : ± 0.05

Del. quantity cm ³ /1000 strokes	: 158.0
<hr/>	
Tolerance cm ³ /1000 strokes	: ± 1.0
<hr/>	
Check tolerance cm ³ /1000S.	: ± 4.0
<hr/>	
Spreed Tolerance cm ³ /1000 strokes	: 5.0
<hr/>	
Check tolerance cm ³ /1000S.	: 9.0
Rated speed rpm	: 275
Rack travel in mm	: -4.50
Tolerance mm	: ± 0.20
Del. quantity cm ³ /1000 strokes	: 21.0
Tolerance cm ³ /1000 strokes	: ± 2.0
Check tolerance cm ³ /1000S.	: ± 5.0
Spreed Tolerance cm ³ /1000 strokes	: 8.0
Check tolerance cm ³ /1000S.	: 12.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm	: 300
guide sleeve travel mm	: 2.35
Tolerance mm	: ± 0.10
Rated speed rpm	: 1126
guide sleeve travel mm	: 6.38
Tolerance mm	: ± 0.10
Rated speed rpm	: 1050
guide sleeve travel mm	: 6.00
Tolerance mm	: ± 0.10
Rated speed rpm	: 582
guide sleeve travel mm	: 5.14
Tolerance mm	: ± 0.10
Rated speed rpm	: 710

G09

guide sleeve travel mm	: 6.00
Tolerance mm	: ± 0.10
Rated speed rpm	: 1380
guide sleeve travel mm	: 11.50
Tolerance mm	: ± 0.50

GUIDE SLEEVE POSITION

Rated speed rpm	: 750
Rack travel in mm	: 20.00
Tolerance mm	: ± 0.80

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm	: 700
Aneroid pressure hPa	: 1000
Del. quantity cm ³ /1000 strokes	: 158.0
Tolerance cm ³ /1000 strokes	: ± 1.0
Check tolerance cm ³ /1000S.	: ± 4.0
Spreed Tolerance cm ³ /1000 strokes	: 5.0
Check tolerance cm ³ /1000S.	: 9.0

CONTROL LEVER

control lever position degree	: 274.0
tolerance degree	: ± 4.0

RATED SPEED

rack travel mm	: -1.00
Rated speed rpm	: 1138
Tolerance 1/min	: ± 8
rack travel mm	: -7.20
Rated speed rpm	: 1245
Tolerance 1/min	: ± 15
rack travel mm	: -10.75
Tolerance mm	: ± 0.55
Rated speed rpm	: 1350

LOW IDLE

control lever
position degree : 253.0
tolerance degree : ± 4.0

Testing:

Rated speed rpm : 275
rack travel mm : -4.50
Tolerance mm : ± 0.10

rack travel mm : -9.25
Rated speed rpm : 580
Tolerance 1/min : ± 20

Rated speed rpm : 200

CRT mm max. : < -3.00

TORQUE CONTROL

Rated speed rpm : 700

Rated speed rpm : 1050
Tolerance mm : ± 0.10

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1000

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 500
rack travel mm : -1.20
Tolerance mm : ± 0.20

Rated speed rpm : 500

Pressure hPa : 220
rack travel mm : -0.45
Tolerance mm : ± 0.15

Pressure hPa : 160
rack travel mm : -0.85
Tolerance mm : ± 0.05

START CUT-OUT

Rated speed rpm : > 100
Rated speed rpm : < 195

Check
speed 1/min : > 80
Check
speed 1/min : < 215

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 1000
Rated speed rpm : 1050
Del. quantity
cm³/1000 strokes : 154.0
Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 6.0

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 114.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 4.0

BREAKAWAY

Rack travel in mm : -1.00
Rated speed rpm : 1138
Tolerance 1/min : ± 8

STARTING FUEL DELIVERY

Del. quantity
cm³/1000 strokes : 155.0
Tolerance
cm³/1000 strokes : ± 10.0
Check tolerance
cm³/1000S. : ± 14.0

LOW IDLE

Rated speed rpm : 275
rack travel mm : -4.50
Tolerance mm : ± 0.20
Del. quantity
cm³/1000 strokes : 21.0
Tolerance
cm³/1000 strokes : ± 2.0

Check tolerance
cm³/1000s. : ± 5.0
Spreed
Tolerance
cm³/1000 strokes : 8.0
Check tolerance
cm³/1000s. : 12.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 09.01.96
Test oil : ISO 4113

Combination No. : 0 402 076 771

Injection pump
Pump designation : PES6P120A720RS3340
EP type number : 0 412 026 773

Governor
Governor design. : RSV650...1100P8A566
: -1
Governor no. : 0 421 833 452

Cust. part No. :

Customer-spec. information
Customer : FNH-GEOTECH
Power KW : 201.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet temp. °C : 40
Tolerance °C : ± 2.0

Overflow valve : 2 417 413 086

Inlet press. bar : 1.5

Test nozzle holder assembly : 1 688 901 103

Opening pressure bar : 208.5
Tolerance bar : ± 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0

Prestroke mm : 3.60
Tolerance mm : ± 0.05
Check tolerance mm : ± 0.10

Rack travel in mm : 10.50
Tolerance mm : ± 1.50

Firing order : 1- 5- 3- 6- 2-
: 4

Phasing : 0-60-120-180-240
: -300
Tolerance : ± 0.30
Check tolerance °NW : ± 0.50

Start of delivery blocking
Check tolerance °NW : ± 0.30
Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1075

Rack travel in mm : 12.35
Tolerance mm : ± 0.05

Del. quantity
cm³/1000 strokes : 183.0

Tolerance
cm³/1000 strokes : ± 1.0

Check tolerance
cm³/1000S. : ± 6.0

Spreed
Tolerance
cm³/1000 strokes : 5.0

Check tolerance
cm³/1000S. : 9.0

Rated speed rpm : 650

Rack travel in mm : 4.60
Tolerance mm : ± 0.20

Del. quantity
cm³/1000 strokes : 23.0
Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 6.0

Spreed
Tolerance
cm³/1000 strokes : 8.0
Check tolerance
cm³/1000S. : 12.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800

Rack travel in mm : 0.50
Tolerance mm : ± 0.20

governor spring
pre-tension
click setting x : 2.50

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1075
Aneroid pressure
hPa : 1600
Del. quantity
cm³/1000 strokes : 183.0
Tolerance
cm³/1000 strokes : ± 1.0

Check tolerance
cm³/1000S. : ± 6.0
Spreed
Tolerance
cm³/1000 strokes : 5.0
Check tolerance
cm³/1000S. : 9.0

CONTROL LEVER

control lever
position degree : 97.0
tolerance degree : ± 4.0

RATED SPEED

rack travel mm : 4.00
Rated speed rpm : 1165

ASSEMBLY GOVERNOR SETTING

Rated speed rpm : 1121
rack travel mm : 11.30

Rated speed rpm : 1152
Tolerance 1/min : ± 5
rack travel mm : 4.00

rack travel mm : 0.85
Tolerance mm : ± 0.55
Rated speed rpm : 1350

Rated speed rpm : 1122
rack travel mm : 11.30

Rated speed rpm : 1153
Tolerance 1/min : ± 5
rack travel mm : 4.00

rack travel mm : 0.85
Tolerance mm : ± 0.55

Rated speed rpm : 1123
rack travel mm : 11.30

Rated speed rpm : 1154
Tolerance 1/min : ± 5
rack travel mm : 4.00

rack travel mm : 0.85
Tolerance mm : ± 0.55

Rated speed rpm : 1124
rack travel mm : 11.30

Rated speed rpm : 1155
Tolerance 1/min : ± 5
rack travel mm : 4.00

rack travel mm : 0.85
Tolerance mm : ± 0.55

Rated speed rpm : 1125
rack travel mm : 11.30

Rated speed rpm : 1156
Tolerance 1/min : ± 5
rack travel mm : 4.00

rack travel mm : 0.85
Tolerance mm : ± 0.55

Rated speed rpm : 1126
rack travel mm : 11.30

Rated speed rpm : 1157
Tolerance 1/min : ± 5
rack travel mm : 4.00

rack travel mm : 0.85
Tolerance mm : ± 0.55

LOW IDLE

control lever
position degree : 78.0
tolerance degree : ± 4.0

Setting point w/out bumper spring

Rated speed rpm : 650
rack travel mm : 4.10

Testing:

Rated speed rpm : 650
rack travel mm : 4.60
Tolerance mm : ± 0.10

rack travel mm : 2.00
Rated speed rpm : 750

TORQUE CONTROL

Rated speed rpm : 1075
rack travel mm : 12.35
Tolerance mm : ± 0.05

Rated speed rpm : 800
rack travel mm : 13.15
Tolerance mm : ± 0.10

Rated speed rpm : 700
rack travel mm : 13.20
Tolerance mm : ± 0.15

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1600
rack travel mm : 13.20
Tolerance mm : ± 0.15

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 500
rack travel mm : 7.60
Tolerance mm : ± 0.15

Rated speed rpm : 500

Pressure hPa : 1060
rack travel mm : 11.80
Tolerance mm : ± 0.10

START CUT-OUT

Rated speed rpm : > 100

Check
speed 1/min : > 80

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 1600
Rated speed rpm : 800
Del. quantity
cm³/1000 strokes : 210.0
Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 6.0

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 83.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.50
Tolerance mm : + 0.50
Del. quantity
cm³/1000 strokes : 150.0
Tolerance
cm³/1000 strokes : + 15.0
Check tolerance
cm³/1000S. : + 19.0

LOW IDLE

Rated speed rpm : 650
rack travel mm : 4.60
Tolerance mm : + 0.20
Del. quantity
cm³/1000 strokes : 23.0
Tolerance
cm³/1000 strokes : + 3.0
Check tolerance
cm³/1000S. : + 6.0
Spreed
Tolerance
cm³/1000 strokes : 8.0
Check tolerance
cm³/1000S. : 12.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 23.06.95
Test oil : ISO 4113

Combination No. : 0 402 646 626

Injection pump
Pump designation : PE6P120A320RS7299
EP type number : 0 412 626 885

Governor
Governor design. : RQV275...1000PA1076K
Governor no. : 0 421 815 357

Cust. part No. : 1280160

Customer-spec. information

Customer : DAF
Motor : WS 268 M
Power KW : 268.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5
Tolerance bar : ± 0.1

Overflow quantity
min. l/h : 160
Tolerance l/h : ± 20.0

Test nozzle holder
assembly : 1 688 901 105

Opening pressure
bar : 208.5
Tolerance bar : ± 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0

Prestroke mm : 4.85
Tolerance mm : ± 0.05
Check
tolerance mm : ± 0.10

Rack travel in mm : 10.50
Tolerance mm : ± 1.50

Firing order : 1- 5- 3- 6- 2-
: 4

Phasing : 0-60-120-180-240
: -300
Tolerance : ± 0.30
Check
tolerance °NW : ± 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 980

Rack travel in mm : 13.55
Tolerance mm : ± 0.05

Del. quantity
cm³/1000 strokes : 250.0

Tolerance
 cm³/1000 strokes : + 1.0

Check tolerance
 cm³/1000S. : + 4.0

Spreed
 Tolerance
 cm³/1000 strokes : 5.0

Check tolerance
 cm³/1000S. : 9.0

Rated speed rpm : 275

Rack travel in mm : 5.60
 Tolerance mm : + 0.10
 Del. quantity
 cm³/1000 strokes : 17.0
 Tolerance
 cm³/1000 strokes : + 3.0
 Check tolerance
 cm³/1000S. : + 6.0
 Spreed
 Tolerance
 cm³/1000 strokes : 8.0
 Check tolerance
 cm³/1000S. : 12.0

(B) SETTING OF INJECTION PUMP
 WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm : 275
 guide sleeve
 travel mm : 2.14
 Tolerance mm : + 0.15

Rated speed rpm : 1045
 guide sleeve
 travel mm : 9.82
 Tolerance mm : + 0.20

Rated speed rpm : 689
 guide sleeve
 travel mm : 6.43
 Tolerance mm : + 0.25

Rated speed rpm : 284
 guide sleeve
 travel mm : 2.27
 Tolerance mm : + 0.25

Rated speed rpm : 334
 guide sleeve
 travel mm : 3.17
 Tolerance mm : + 0.25

Rated speed rpm : 390
 guide sleeve
 travel mm : 3.79
 Tolerance mm : + 0.25

Rated speed rpm : 1310
 guide sleeve
 travel mm : 13.50
 Tolerance mm : + 0.50

GUIDE SLEEVE POSITION

Rated speed rpm : 1130
 Rack travel in mm : 12.60
 Tolerance mm : + 1.30

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 980
 Aneroid pressure
 hPa : -
 Del. quantity
 cm³/1000 strokes : 250.0
 Tolerance
 cm³/1000 strokes : + 1.0
 Check tolerance
 cm³/1000S. : + 4.0
 Spreed
 Tolerance
 cm³/1000 strokes : 5.0
 Check tolerance
 cm³/1000S. : 9.0

CONTROL LEVER

control lever
 position degree : 120.0
 tolerance degree : + 4.0

RATED SPEED

rack travel mm : 12.55
 Rated speed rpm : 1042
 Tolerance 1/min : + 5

rack travel mm : 4.00
 Rated speed rpm : 1160
 Tolerance 1/min : + 15

rack travel mm : 0.70
 Tolerance mm : + 0.70
 Rated speed rpm : 1275

LOW IDLE

control lever
position degree : 76.0
tolerance degree : ± 4.0

Testing:

Rated speed rpm : 275
rack travel mm : 4.80
Tolerance mm : ± 0.10

rack travel mm : 2.00
Rated speed rpm : 390
Tolerance 1/min : ± 20

Rated speed rpm : 175

CRT mm min. : > 7.50

TORQUE CONTROL

Rated speed rpm : 980
rack travel mm : 13.55
Tolerance mm : ± 0.05

Rated speed rpm : 750
rack travel mm : 13.05
Tolerance mm : ± 0.10

Rated speed rpm : 825
rack travel mm : 13.30
Tolerance mm : ± 0.20

Rated speed rpm : 600
rack travel mm : 12.10
Tolerance mm : ± 0.20

Rated speed rpm : 500
rack travel mm : 11.70
Tolerance mm : ± 0.15

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 980
Pressure hPa : 1500
rack travel mm : 13.55
Tolerance mm : ± 0.05

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 980
rack travel mm : 8.60
Tolerance mm : ± 0.10

Rated speed rpm : 980

Pressure hPa : 720
rack travel mm : 12.25
Tolerance mm : ± 0.05

Pressure hPa : 360
rack travel mm : 9.80
Tolerance mm : ± 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : -
Rated speed rpm : 750
Del. quantity
cm³/1000 strokes : 263.0
Tolerance

cm³/1000 strokes : ± 2.0
Check tolerance
cm³/1000S. : ± 5.0

Spread
Tolerance
cm³/1000 strokes : 8.0
Check tolerance
cm³/1000S. : 12.0

Aneroid pressure
hPa : -
Rated speed rpm : 600
Del. quantity
cm³/1000 strokes : 154.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 4.0

BREAKAWAY

Rack travel in mm : 12.55
Rated speed rpm : 1042
Tolerance 1/min : ± 5

LOW IDLE

Rated speed rpm : 275
rack travel mm : 5.60
Tolerance mm : +- 0.10
Del. quantity
cm³/1000 strokes : 17.0
Tolerance
cm³/1000 strokes : +- 3.0
Check tolerance
cm³/1000S. : +- 6.0
Spreed
Tolerance
cm³/1000 strokes : 8.0
Check tolerance
cm³/1000S. : 12.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 12.01.96
Test oil : ISO 4113
Combination No. : 0 402 646 665
Injection pump
Pump designation : PE6P130A720RS7354
EP type number : 0 412 636 835
Governor
Governor design. : RQV300...950PA1002
: -3K
Governor no. : 0 421 815 491
Cust. part No. :

Customer-spec. information
Customer : IVECO-FRANCE
Motor : 8210.42K.3000

TEST BENCH REQUIREMENTS

Inlet line : 4.2
Test oil inlet
temp. °C : 40
Tolerance °C : + 2.0
Overflow valve : 2 417 413 076
Inlet press. bar : 2.5
Tolerance bar : + 0.1
Test nozzle holde
assembly : 1 688 901 105
Opening pressure
bar : 208.5
Tolerance bar : + 1.5
Test lines : 1 680 750 075
Outside diameter : 8.0

G20

x inside diameter : 3.0
x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : + 1.0
Prestroke mm : 5.05
Tolerance mm : + 0.05
Check
tolerance mm : + 0.10
Rack travel in mm : 12.00
Tolerance mm : + 0.50
Firing order : 1- 5- 3- 6- 2-
: 4
Phasing : 0-60-120-180-240
: -300
Tolerance : + 0.30
Check
tolerance °NW : + 0.50
Start of delivery mark
Check
tolerance °NW : + 0.40
Barrel no. : 1

BASIC SETTING

Rated speed rpm : 950
Rack travel in mm : 12.05
Tolerance mm : + 0.05
Del. quantity
cm³/1000 strokes : 244.0
Tolerance
cm³/1000 strokes : + 1.0

<hr/>	
Check tolerance	
cm ³ /1000S.	: + 4.0
<hr/>	
Spread	
Tolerance	
cm ³ /1000 strokes	: 5.0
<hr/>	
Check tolerance	
cm ³ /1000S.	: 9.0
<hr/>	
Rated speed rpm	: 300
<hr/>	
Rack travel in mm	: 4.70
Tolerance mm	: + 0.20
Del. quantity	
cm ³ /1000 strokes	: 22.0
Tolerance	
cm ³ /1000 strokes	: + 3.0
Check tolerance	
cm ³ /1000S.	: + 6.0
Spread	
Tolerance	
cm ³ /1000 strokes	: 8.0
Check tolerance	
cm ³ /1000S.	: 12.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm	: 300
guide sleeve	
travel mm	: 1.64
Tolerance mm	: + 0.20
<hr/>	
Rated speed rpm	: 1025
guide sleeve	
travel mm	: 9.00
Tolerance mm	: + 0.15
<hr/>	
Rated speed rpm	: 764
guide sleeve	
travel mm	: 6.22
Tolerance mm	: + 0.25
<hr/>	
Rated speed rpm	: 500
guide sleeve	
travel mm	: 3.78
Tolerance mm	: + 0.25
<hr/>	
Rated speed rpm	: 1330
guide sleeve	
travel mm	: 13.50
Tolerance mm	: + 0.50

GUIDE SLEEVE POSITION

Rated speed rpm	: 1190
<hr/>	
Rack travel in mm	: 11.00
Tolerance mm	: + 2.70

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm	: 950
Aneroid pressure	
hPa	: 1000
Del. quantity	
cm ³ /1000 strokes	: 244.0
Tolerance	
cm ³ /1000 strokes	: + 1.0
Check tolerance	
cm ³ /1000S.	: + 4.0
Spread	
Tolerance	
cm ³ /1000 strokes	: 5.0
Check tolerance	
cm ³ /1000S.	: 9.0

CONTROL LEVER

control lever	
position degree	: 114.0
tolerance degree	: + 4.0

RATED SPEED

rack travel mm	: 11.00
Rated speed rpm	: 1015
Tolerance 1/min	: + 5
<hr/>	
rack travel mm	: 4.00
Rated speed rpm	: 1115
Tolerance 1/min	: + 15
<hr/>	
rack travel mm	: 0.50
Tolerance mm	: + 0.50
Rated speed rpm	: 1250

LOW IDLE

control lever	
position degree	: 69.0
tolerance degree	: + 4.0

Testing:

Rated speed rpm : 300
rack travel mm : 4.70
Tolerance mm : ± 0.10

Rated speed rpm : 200
CRT mm min. : > 6.20

Rated speed rpm : 355

TORQUE CONTROL

Rated speed rpm : 950
rack travel mm : 12.05
Tolerance mm : ± 0.05

Rated speed rpm : 700
rack travel mm : 11.85
Tolerance mm : ± 0.10

Rated speed rpm : 550
rack travel mm : 11.40
Tolerance mm : ± 0.10

Rated speed rpm : 300
rack travel mm : 10.90
Tolerance mm : ± 0.30

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 950
Pressure hPa : 1000
rack travel mm : 12.05
Tolerance mm : ± 0.05

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 950
rack travel mm : 8.40
Tolerance mm : ± 0.20

Rated speed rpm : 950

Pressure hPa : 290
rack travel mm : 9.35
Tolerance mm : ± 0.20

Pressure hPa : 500
rack travel mm : 11.10
Tolerance mm : ± 0.05

START CUT-OUT

G22

Rated speed rpm : > 180
Rated speed rpm : < 220

Check
speed 1/min : > 160
Check
speed 1/min : < 240

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 1000
Rated speed rpm : 550
Del. quantity
cm³/1000 strokes : 264.0
Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 6.0

Aneroid pressure
hPa : -
Rated speed rpm : 550
Del. quantity
cm³/1000 strokes : 174.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 4.0

BREAKAWAY

Rack travel in mm : 11.00
Rated speed rpm : 1015
Tolerance 1/min : ± 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.25
Tolerance mm : ± 0.75
Del. quantity
cm³/1000 strokes : 160.0
Tolerance
cm³/1000 strokes : ± 15.0
Check tolerance
cm³/1000S. : ± 19.0

LOW IDLE

Rated speed rpm : 300

rack travel mm : 4.70
Tolerance mm : +- 0.20
Del. quantity
cm³/1000 strokes : 22.0
Tolerance
cm³/1000 strokes : +- 3.0
Check tolerance
cm³/1000S. : +- 6.0
Spreed
Tolerance
cm³/1000 strokes : 8.0
Check tolerance
cm³/1000S. : 12.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 02.06.95
Test oil : ISO 4113
Combination No. : 0 402 646 757
Injection pump
Pump designation : PE6P120A320LS7836
 : -10
EP type number : 0 412 626 854
Governor
Governor design. : RQ300/1050PA1030-25
Governor no. : 0 421 801 771
Cust. part No. : 0260743002

Customer-spec. information
Customer : MB-NFZ
Motor : OM401 LA
Power KW : 200.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet
temp. °C : 40
Tolerance °C : +- 2.0
Overflow valve : 1 417 413 047
Inlet press. bar : 1.5
Tolerance bar : +- 0.1
Tolerance l/h : +- 10.0
Test nozzle holde
assembly : 1 688 901 105
Opening pressure
bar : 208.5
Tolerance bar : +- 1.5

Test lines : 1 680 750 075
Outside diameter : 8.0
x inside diameter : 3.0
x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : +- 1.0
Prestroke mm : 5.55
Tolerance mm : +- 0.05
Check
tolerance mm : +- 0.10
Rack travel in mm : 20.50
Tolerance mm : +- 0.50
Firing order : 6- 3- 5- 2- 4-
 : 1-
Phasing : 0-60-120-180-240
 : -300-360
Tolerance : +- 0.30
Check
tolerance °NW : +- 0.75

Start of delivery mark

Barrel no. : 6

BASIC SETTING

Rated speed rpm : 1050
Rack travel in mm : 13.00
Tolerance mm : +- 0.05
Del. quantity
cm³/1000 strokes : 190.0

Tolerance
cm³/1000 strokes : ± 1.0

Check tolerance
cm³/1000S. : ± 4.0

Spread
Tolerance
cm³/1000 strokes : 5.0

Check tolerance
cm³/1000S. : 9.0

Rated speed rpm : 300

Rack travel in mm : 5.80
Tolerance mm : ± 0.30

Del. quantity
cm³/1000 strokes : 19.0

Tolerance
cm³/1000 strokes : ± 3.0

Check tolerance
cm³/1000S. : ± 6.0

Spread
Tolerance
cm³/1000 strokes : 6.0

Check tolerance
cm³/1000S. : 10.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 600

Rack travel in mm : 20.00
Tolerance mm : ± 0.80

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1050
Aneroid pressure
hPa : 800

Del. quantity
cm³/1000 strokes : 190.0

Tolerance
cm³/1000 strokes : ± 1.0

Check tolerance
cm³/1000S. : ± 4.0

Spread
Tolerance
cm³/1000 strokes : 5.0

Check tolerance
cm³/1000S. : 9.0

CONTROL LEVER

control lever
position degree : 95.0
tolerance degree : ± 4.0

RATED SPEED

rack travel mm : 12.00
Rated speed rpm : 1098
Tolerance 1/min : ± 8

rack travel mm : 4.00
Rated speed rpm : 1185
Tolerance 1/min : ± 15

rack travel mm : 0.75
Tolerance mm : ± 0.75
Rated speed rpm : 1300

LOW IDLE

control lever
position degree : 72.0
tolerance degree : ± 4.0

Testing:

Rated speed rpm : 300
rack travel mm : 5.80
Tolerance mm : ± 0.10

rack travel mm : 2.00
Rated speed rpm : 415
Tolerance 1/min : ± 20

Rated speed rpm : 200

CRT mm min. : > 7.60

TORQUE CONTROL

Rated speed rpm : 1050
rack travel mm : 13.00
Tolerance mm : ± 0.05

Rated speed rpm : 550
rack travel mm : 13.00
Tolerance mm : ± 0.10

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 400
Pressure hPa : 800
rack travel mm : 13.00
Tolerance mm : ± 0.05

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 400
rack travel mm : 10.90
Tolerance mm : ± 0.15

Rated speed rpm : 400

Pressure hPa : 200
rack travel mm : 11.40
Tolerance mm : ± 0.20

Pressure hPa : 350
rack travel mm : 12.25
Tolerance mm : ± 0.20

START CUT-OUT

Rated speed rpm : > 100
Rated speed rpm : < 220

Check speed 1/min : > 80
Check speed 1/min : < 240

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 800
Rated speed rpm : 550
Del. quantity
cm³/1000 strokes : 189.0
Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 6.0
Spreed
Tolerance
cm³/1000 strokes : 8.0
Check tolerance
cm³/1000S. : 12.0

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 132.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 4.0
Spreed
Tolerance
cm³/1000 strokes : 8.0
Check tolerance
cm³/1000S. : 12.0

BREAKAWAY

Rack travel in mm : 12.00
Rated speed rpm : 1098
Tolerance 1/min : ± 8

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm³/1000 strokes : 210.0
Tolerance
cm³/1000 strokes : ± 15.0
Check tolerance
cm³/1000S. : ± 19.0

LOW IDLE

Rated speed rpm : 300
rack travel mm : 5.80
Tolerance mm : ± 0.30
Del. quantity
cm³/1000 strokes : 19.0
Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 6.0
Spreed
Tolerance
cm³/1000 strokes : 6.0
Check tolerance
cm³/1000S. : 10.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 17.01.96
Test oil : ISO 4113
Combination No. : D 402 646 785
Injection pump
Pump designation : PE6P120A320LS7869
EP type number : D 412 626 887
Governor
Governor design. : RQV300...1050PA1078K
Governor no. : D 421 815 359
Cust. part No. : 9275445

Customer-spec. information
Customer : LIEBHERR
Motor : D 9406 TI
Power KW : 300.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet temp. °C : 40
Tolerance °C : ± 2.0
Overflow valve : 1 417 413 025
Inlet press. bar : 1.5
Tolerance bar : ± 0.1
Overflow quantity min. l/h : 165
Tolerance l/h : ± 20.0
Test nozzle holder assembly : 1 688 901 105
Opening pressure bar : 208.5
Tolerance bar : ± 1.5

G27

Test Lines : 1 680 750 075
Outside diameter : 8.0
x inside diameter : 3.0
x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0
Prestroke mm : 3.65
Tolerance mm : ± 0.05
Check tolerance mm : ± 0.10
Rack travel in mm : 10.50
Tolerance mm : ± 1.50
Firing order : 1- 6- 3- 5- 2-
: 4
Phasing : 0-60-120-180-240
: -300
Tolerance : ± 0.30
Check tolerance °NW : ± 0.50

BASIC SETTING

Rated speed rpm : 1050
Rack travel in mm : 12.00
Tolerance mm : ± 0.05
Del. quantity cm³/1000 strokes : 279.0
Tolerance cm³/1000 strokes : ± 1.0
Check tolerance cm³/1000S. : ± 4.0

Spreed
Tolerance
cm3/1000 strokes : 5.0

Check tolerance
cm3/1000s. : 9.0

Rated speed rpm : 300

Rack travel in mm : 6.10
Tolerance mm : + 0.10

Del. quantity
cm3/1000 strokes : 50.0

Tolerance
cm3/1000 strokes : + 3.0

Check tolerance
cm3/1000s. : + 6.0

Spreed
Tolerance
cm3/1000 strokes : 6.0

Check tolerance
cm3/1000s. : 10.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm : 300
guide sleeve
travel mm : 1.69
Tolerance mm : + 0.25

Rated speed rpm : 1117
guide sleeve
travel mm : 10.38
Tolerance mm : + 0.25

Rated speed rpm : 746
guide sleeve
travel mm : 6.20
Tolerance mm : + 0.25

Rated speed rpm : 353
guide sleeve
travel mm : 2.45
Tolerance mm : + 0.25

Rated speed rpm : 403
guide sleeve
travel mm : 3.18
Tolerance mm : + 0.25

Rated speed rpm : 450
guide sleeve
travel mm : 3.66
Tolerance mm : + 0.25

Rated speed rpm : 1320
guide sleeve
travel mm : 13.50
Tolerance mm : + 0.50

GUIDE SLEEVE POSITION

Rated speed rpm : 1185

Rack travel in mm : 10.80
Tolerance mm : + 1.30

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1050
Aneroid pressure
hPa : 1550

Del. quantity
cm3/1000 strokes : 279.0

Tolerance
cm3/1000 strokes : + 1.0

Check tolerance
cm3/1000s. : + 4.0

Spreed
Tolerance
cm3/1000 strokes : 5.0

Check tolerance
cm3/1000s. : 9.0

CONTROL LEVER

control lever
position degree : 121.0
tolerance degree : + 4.0

RATED SPEED

rack travel mm : 11.00
Rated speed rpm : 1105
Tolerance 1/min : + 5

rack travel mm : 4.00
Rated speed rpm : 1185
Tolerance 1/min : + 15

rack travel mm : 0.50
Tolerance mm : + 0.50
Rated speed rpm : 1300

LOW IDLE

control lever
position degree : 74.0
tolerance degree : ± 4.0

Testing:

Rated speed rpm : 300
rack travel mm : 6.10
Tolerance mm : ± 0.10

Rated speed rpm : 200

CRT mm min. : > 8.00

Rated speed rpm : 400

TORQUE CONTROL

Rated speed rpm : 1050
rack travel mm : 12.00
Tolerance mm : ± 0.05

Rated speed rpm : 800
rack travel mm : 11.65
Tolerance mm : ± 0.10

Rated speed rpm : 500
rack travel mm : 9.75
Tolerance mm : ± 0.10

Rated speed rpm : 950
rack travel mm : 11.85
Tolerance mm : ± 0.10

Rated speed rpm : 600
rack travel mm : 10.25
Tolerance mm : ± 0.10

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 1050
Pressure hPa : 1550
rack travel mm : 12.00
Tolerance mm : ± 0.05

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 1050
rack travel mm : 9.35
Tolerance mm : ± 0.10

Rated speed rpm : 1050

H01

Pressure hPa : 725
rack travel mm : 10.70
Tolerance mm : ± 0.05

Pressure hPa : 525
rack travel mm : 9.50
Tolerance mm : ± 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 1550
Rated speed rpm : 800
Del. quantity
cm³/1000 strokes : 295.0
Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 6.0

Aneroid pressure
hPa : 1550
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 270.0
Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 6.0

Aneroid pressure
hPa : -
Rated speed rpm : 550
Del. quantity
cm³/1000 strokes : 250.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 4.0
Spreed
Tolerance
cm³/1000 strokes : 8.0
Check tolerance
cm³/1000S. : 12.0

BREAKAWAY

Rack travel in mm : 11.00
Rated speed rpm : 1105
Tolerance 1/min : ± 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 9.55
Tolerance mm : \pm 0.30
Del. quantity
cm³/1000 strokes : 170.0
Tolerance
cm³/1000 strokes : \pm 10.0
Check tolerance
cm³/1000S. : \pm 14.0

LOW IDLE

Rated speed rpm : 300
rack travel mm : 6.10
Tolerance mm : \pm 0.10
Del. quantity
cm³/1000 strokes : 50.0
Tolerance
cm³/1000 strokes : \pm 3.0
Check tolerance
cm³/1000S. : \pm 6.0
Spreed
Tolerance
cm³/1000 strokes : 6.0
Check tolerance
cm³/1000S. : 10.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 17.01.96
Test oil : ISO 4113

Combination No. : 0 402 646 969

Injection pump
Pump designation : PE6P120A32ORS7248
 : -10Z
EP type number : 0 412 626 901

Governor
Governor design. : RQV275...1150PA986
Governor no. : 0 421 813 920

Cust. part No. : 1248041/4

Customer-spec. information
Customer : DAF
Motor : RS 200 L
Power kW : 200.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet
temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5
Tolerance bar : +- 0.1

Overflow quantity
min. L/h : 130
Tolerance L/h : +- 10.0

Test nozzle holde
assembly : 1 688 901 105

Opening pressure
bar : 208.5
Tolerance bar : +- 1.5

H03

Test lines : 1 680 750 089
Outside diameter : 8.0
x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : +- 1.0

Prestroke mm : 5.25
Tolerance mm : +- 0.05
Check
tolerance mm : +- 0.10

Rack travel in mm : 11.50
Tolerance mm : +- 0.50

Firing order : 1- 5- 3- 6- 2-
 : 4

Phasing : 0-60-120-180-240
 : -300
Tolerance : +- 0.30
Check
tolerance °NW : +- 0.50

Start of delivery mark
Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 11.70
Tolerance mm : +- 0.05

Del. quantity
cm³/1000 strokes : 167.0

Tolerance
cm³/1000 strokes : +- 1.0

Check tolerance
cm³/1000S. : +- 4.0

Spread
Tolerance
cm³/1000 strokes : 5.0

Check tolerance
cm³/1000S. : 9.0

Rated speed rpm : 275

Rack travel in mm : 5.40
Tolerance mm : +- 0.10

Del. quantity
cm³/1000 strokes : 16.0

Tolerance
cm³/1000 strokes : +- 3.0

Check tolerance
cm³/1000S. : +- 6.0

Spread
Tolerance
cm³/1000 strokes : 8.0

Check tolerance
cm³/1000S. : 12.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 1335

Rack travel in mm : 10.30
Tolerance mm : +- 1.30

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1000
Aneroid pressure
hPa : 1000
Del. quantity
cm³/1000 strokes : 167.0

Tolerance
cm³/1000 strokes : +- 1.0

Check tolerance
cm³/1000S. : +- 4.0

Spread
Tolerance
cm³/1000 strokes : 5.0

Check tolerance
cm³/1000S. : 9.0

CONTROL LEVER

control lever
position degree : 120.0
tolerance degree : +- 4.0

RATED SPEED

rack travel mm : 10.70
Rated speed rpm : 1182
Tolerance 1/min : +- 5

rack travel mm : 4.00
Rated speed rpm : 1290
Tolerance 1/min : +- 15

rack travel mm : 0.70
Tolerance mm : +- 0.70
Rated speed rpm : 1450

LOW IDLE

control lever
position degree : 83.0
tolerance degree : +- 4.0

Testing:

Rated speed rpm : 275
rack travel mm : 4.70
Tolerance mm : +- 0.10

Rated speed rpm : 175

CRT mm min. : > 7.50

Rated speed rpm : 340

TORQUE CONTROL

Rated speed rpm : 1000
rack travel mm : 11.70
Tolerance mm : +- 0.05

Rated speed rpm : 1150
rack travel mm : 11.70
Tolerance mm : +- 0.10

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 600
Pressure hPa : 1000
rack travel mm : 11.70
Tolerance mm : +- 0.05

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 600
rack travel mm : 9.20
Tolerance mm : +- 0.15

Rated speed rpm : 600

Pressure hPa : 340
rack travel mm : 10.75
Tolerance mm : +- 0.05

Pressure hPa : 200
rack travel mm : 9.70
Tolerance mm : +- 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : -
Rated speed rpm : 600
Del. quantity
cm³/1000 strokes : 117.0
Tolerance
cm³/1000 strokes : +- 1.0
Check tolerance
cm³/1000S. : +- 4.0

BREAKAWAY

Rack travel in mm : 10.70
Rated speed rpm : 1182
Tolerance 1/min : +- 5

LOW IDLE

Rated speed rpm : 275
rack travel mm : 5.40
Tolerance mm : +- 0.10
Del. quantity
cm³/1000 strokes : 16.0
Tolerance
cm³/1000 strokes : +- 3.0

H05

Check tolerance
cm³/1000S. : +- 6.0
Spreed
Tolerance
cm³/1000 strokes : 8.0
Check tolerance
cm³/1000S. : 12.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 17.01.96
Test oil : ISO 4113

Combination No. : 0 402 648 792

Injection pump
Pump designation : PE8P120A320LS7840
: -10
EP type number : 0 412 628 856

Governor
Governor design. : RQ300/1050PA1276
Governor no. : 0 421 801 806

Inst. part No. : 0270740302

Customer-spec. information
Customer : MB-NFZ
Motor : OM442A
Power KW : 250.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5
Tolerance bar : ± 0.1

Test nozzle holde
assembly : 1 688 901 105

Opening pressure
bar : 208.5
Tolerance bar : ± 1.5

Test lines : 1 680 750 075

H06

Outside diameter : 8.0
x inside diameter : 3.0
x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0

Prestroke mm : 5.25
Tolerance mm : ± 0.05
Check
tolerance mm : ± 0.10

Rack travel in mm : 20.50
Tolerance mm : ± 0.50

Firing order : 8- 7- 2- 6- 3
: - 5- 4- 1

Phasing : 0-45-90-135-180
: -225-270-315
Tolerance : ± 0.30
Check
tolerance °NW : ± 0.50

Start of delivery mark

Barrel no. : 8

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 13.45
Tolerance mm : ± 0.05

Del. quantity
cm³/1000 strokes : 212.0

Tolerance
cm³/1000 strokes : ± 1.0

Check tolerance
 cm³/1000S. : + 4.0

 Spreed
 Tolerance
 cm³/1000 strokes : 6.0

 Check tolerance
 cm³/1000S. : 9.0
 Rated speed rpm : 300
 Rack travel in mm : 6.50
 Tolerance mm : + 0.30
 Del. quantity
 cm³/1000 strokes : 13.0
 Tolerance
 cm³/1000 strokes : + 3.0
 Check tolerance
 cm³/1000S. : + 6.0
 Spreed
 Tolerance
 cm³/1000 strokes : 8.0
 Check tolerance
 cm³/1000S. : 12.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm : 300
 guide sleeve
 travel mm : 1.86
 Tolerance mm : + 0.20

 Rated speed rpm : 1103
 guide sleeve
 travel mm : 6.71
 Tolerance mm : + 0.15

 Rated speed rpm : 1050
 guide sleeve
 travel mm : 6.35
 Tolerance mm : + 0.10

 Rated speed rpm : 831
 guide sleeve
 travel mm : 6.09
 Tolerance mm : + 0.10

 Rated speed rpm : 447
 guide sleeve
 travel mm : 4.72
 Tolerance mm : + 0.10

 Rated speed rpm : 540

guide sleeve
 travel mm : 6.00
 Tolerance mm : + 0.10

 Rated speed rpm : 1270
 guide sleeve
 travel mm : 11.50
 Tolerance mm : + 0.50

 Rated speed rpm : 892
 guide sleeve
 travel mm : 6.26
 Tolerance mm : + 0.10

GUIDE SLEEVE POSITION

Rated speed rpm : 650
 Rack travel in mm : 20.00
 Tolerance mm : + 0.80

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 700
 Aneroid pressure
 hPa : 750
 Del. quantity
 cm³/1000 strokes : 212.0
 Tolerance
 cm³/1000 strokes : + 1.0
 Check tolerance
 cm³/1000S. : + 4.0
 Spreed
 Tolerance
 cm³/1000 strokes : 6.0
 Check tolerance
 cm³/1000S. : 9.0

CONTROL LEVER

control lever
 position degree : 95.0
 tolerance degree : + 4.0

RATED SPEED

rack travel mm : 11.80
 Rated speed rpm : 1098
 Tolerance 1/min : + 8

 rack travel mm : 4.00
 Rated speed rpm : 1175
 Tolerance 1/min : + 15

 rack travel mm : 0.50
 Tolerance mm : + 0.50

Rated speed rpm : 1300

LOW IDLE

control lever
position degree : 71.0
tolerance degree : +- 4.0

Testing:

Rated speed rpm : 300
rack travel mm : 5.00
Tolerance mm : +- 0.10

rack travel mm : 2.00
Rated speed rpm : 400
Tolerance 1/min : +- 20

Rated speed rpm : 200

CRT mm min. : > 6.60

TORQUE CONTROL

Rated speed rpm : 700
rack travel mm : 13.45
Tolerance mm : +- 0.05

Rated speed rpm : 1050
rack travel mm : 12.80
Tolerance mm : +- 0.10

Rated speed rpm : 900
rack travel mm : 13.15
Tolerance mm : +- 0.15

Rated speed rpm : 800
rack travel mm : 13.45
Tolerance mm : +- 0.10

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 400
Pressure hPa : 750
rack travel mm : 13.45
Tolerance mm : +- 0.05

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 400

H08

rack travel mm : 11.25
Tolerance mm : +- 0.15

Rated speed rpm : 400

Pressure hPa : 200
rack travel mm : 11.60
Tolerance mm : +- 0.20

Pressure hPa : 400
rack travel mm : 12.40
Tolerance mm : +- 0.20

START CUT-OUT

Rated speed rpm : > 100
Rated speed rpm : < 220

Check
speed 1/min : > 80
Check
speed 1/min : < 240

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 750
Rated speed rpm : 1050
Del. quantity
cm³/1000 strokes : 194.0
Tolerance
cm³/1000 strokes : +- 2.0
Check tolerance
cm³/1000S. : +- 5.0

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 137.0
Tolerance
cm³/1000 strokes : +- 1.0
Check tolerance
cm³/1000S. : +- 4.0

BREAKAWAY

Rack travel in mm : 11.80
Rated speed rpm : 1098
Tolerance 1/min : +- 8

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity
cm³/1000 strokes : 200.0
Tolerance
cm³/1000 strokes : +- 10.0
Check tolerance
cm³/1000S. : +- 14.0

LOW IDLE

Rated speed rpm : 300
rack travel mm : 6.50
Tolerance mm : +- 0.30
Del. quantity
cm³/1000 strokes : 13.0
Tolerance
cm³/1000 strokes : +- 3.0
Check tolerance
cm³/1000S. : +- 6.0
Spreed
Tolerance
cm³/1000 strokes : 8.0
Check tolerance
cm³/1000S. : 12.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 17.01.96
Test oil : ISO 4113
Combination No. : 0 402 648 794
Injection pump
Pump designation : PE8P120A320LS7890
EP type number : 0 412 628 913
Governor
Governor design. : RQV350...900PA1266
Governor no. : 0 421 814 171

Cust. part No. : 0260740502

Customer-spec. information

Customer : MB-NFZ
Motor : OM442 LA
Power KW : 327.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet temp. °C : 40
Tolerance °C : ± 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5
Tolerance bar : ± 0.1

Overflow quantity min. l/h : 100
Tolerance l/h : ± 20.0

Test nozzle holder assembly : 1 688 901 105

Opening pressure bar : 208.5
Tolerance bar : ± 1.5

H10

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0

Prestroke mm : 5.25
Tolerance mm : ± 0.05
Check tolerance mm : ± 0.10

Rack travel in mm : 20.50
Tolerance mm : ± 0.50

Firing order : 8- 7- 2- 6- 3
 : - 5- 4- 1

Phasing : 0-45-90-135-180
 : -225-270-315
Tolerance : ± 0.30
Check tolerance °NW : ± 0.50

Start of delivery mark

Barrel no. : 8

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm : 12.20

Rack travel in mm : 12.20
Tolerance mm : ± 0.10
Tolerance mm : ± 0.05

Del. quantity
cm³/1000 strokes : 259.0

Tolerance
cm³/1000 strokes : ± 1.0

Check tolerance
cm³/1000S. : ± 4.0

Spreed
Tolerance
cm³/1000 strokes : 6.0

Check tolerance
cm³/1000S. : 9.0

Rated speed rpm : 350

Rack travel in mm : 4.00
Tolerance mm : ± 0.30

Del. quantity
cm³/1000 strokes : 14.0
Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 6.0

Spreed
Tolerance
cm³/1000 strokes : 6.0
Check tolerance
cm³/1000S. : 10.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm : 350
guide sleeve
travel mm : 1.69
Tolerance mm : ± 0.20

Rated speed rpm : 958
guide sleeve
travel mm : 7.30
Tolerance mm : ± 0.15

Rated speed rpm : 770
guide sleeve
travel mm : 4.89
Tolerance mm : ± 0.25

Rated speed rpm : 520
guide sleeve
travel mm : 3.23
Tolerance mm : ± 0.25

Rated speed rpm : 1073

guide sleeve
travel mm : 10.00
Tolerance mm : ± 0.25

Rated speed rpm : 1160
guide sleeve
travel mm : 11.50
Tolerance mm : ± 0.50

GUIDE SLEEVE POSITION

Rated speed rpm : 1032

Rack travel in mm : 13.50
Tolerance mm : ± 2.00

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 600
Aneroid pressure
hPa : 600
Del. quantity
cm³/1000 strokes : 259.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 4.0
Spreed
Tolerance
cm³/1000 strokes : 6.0
Check tolerance
cm³/1000S. : 9.0

CONTROL LEVER

control lever
position degree : 118.0
tolerance degree : ± 4.0

RATED SPEED

rack travel mm : 13.50
Rated speed rpm : 945
Tolerance 1/min : ± 5

rack travel mm : 4.00
Rated speed rpm : 1025
Tolerance 1/min : ± 15

rack travel mm : 0.75
Tolerance mm : ± 0.75
Rated speed rpm : 1200

LOW IDLE

control lever
position degree : 65.0
tolerance degree : +- 4.0

Testing:

Rated speed rpm : 350
rack travel mm : 4.00
Tolerance mm : +- 0.10

Rated speed rpm : 250

CRT mm min. : > 6.00

Rated speed rpm : 350

TORQUE CONTROL

Rated speed rpm : 600
rack travel mm : 12.20
Tolerance mm : +- 0.05

Rated speed rpm : 880
rack travel mm : 14.50
Tolerance mm : +- 0.10

ANEROID/ALTITUDE
COMPENSATOR TEST

MEASUREMENT

Pressure hPa : 225
rack travel mm : -2.20
Tolerance mm : +- 0.05

Pressure hPa : 350
rack travel mm : -0.90
Tolerance mm : +- 0.10

Pressure hPa : 850
rack travel mm : 0.90
Tolerance mm : +- 0.05

Pressure hPa : 1050
rack travel mm : 2.10
Tolerance mm : +- 0.10

START CUT-OUT

Rated speed rpm : > 100
Rated speed rpm : < 270

Check
speed 1/min : > 80
Check
speed 1/min : < 290

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 1300
Rated speed rpm : 880
Del. quantity
cm³/1000 strokes : 282.0
Tolerance
cm³/1000 strokes : +- 3.0
Check tolerance
cm³/1000S. : +- 6.0

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 191.0
Tolerance
cm³/1000 strokes : +- 1.0
Check tolerance
cm³/1000S. : +- 4.0

BREAKAWAY

Rack travel in mm : 13.50
Rated speed rpm : 945
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm³/1000 strokes : 270.0
Tolerance
cm³/1000 strokes : +- 20.0
Check tolerance
cm³/1000S. : +- 24.0

LOW IDLE

Rated speed rpm : 350
rack travel mm : 4.00
Tolerance mm : +- 0.30
Del. quantity
cm³/1000 strokes : 14.0
Tolerance
cm³/1000 strokes : +- 3.0

Check tolerance
cm³/1000S. : ± 6.0
Speed
Tolerance
cm³/1000 strokes : 6.0
Check tolerance
cm³/1000S. : 10.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 17.01.96
Test oil : ISO 4113

Combination No. : 0 402 746 954

Injection pump
Pump designation : PES6P120A720RS7301
EP type number : 0 412 726 900

Governor
Governor design. : RQV300...1050PA1090K
Governor no. : 0 421 815 362

Cust. part No. : 9275449

Customer-spec. information
Customer : LIEBHERR
Motor : D 926 TI
Power KW : 230.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5
Tolerance bar : ± 0.1

Tolerance l/h : ± 20.0

Test nozzle holde
assembly : 1 688 901 105

Opening pressure
bar : 208.5
Tolerance bar : ± 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0
x inside diameter : 3.0
x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0

Prestroke mm : 4.75
Tolerance mm : ± 0.05
Check
tolerance mm : ± 0.10

Rack travel in mm : 10.50
Tolerance mm : ± 1.50

Firing order : 1- 5- 3- 6- 2-
: 4

Phasing : 0-60-120-180-240
: -300
Tolerance : ± 0.30
Check
tolerance °NW : ± 0.50

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 14.35
Tolerance mm : ± 0.05

Del. quantity
cm³/1000 strokes : 240.0

Tolerance
cm³/1000 strokes : ± 1.0

Check tolerance
cm³/1000S. : ± 4.0

Speed
Tolerance
cm³/1000 strokes : 5.0

Check tolerance
cm³/1000S. : 9.0

Rated speed rpm : 350

Rack travel in mm : 6.10
Tolerance mm : + 0.20

Del. quantity
cm³/1000 strokes : 25.0

Tolerance
cm³/1000 strokes : + 3.0

Check tolerance
cm³/1000S. : + 6.0

Speed
Tolerance
cm³/1000 strokes : 6.0

Check tolerance
cm³/1000S. : 10.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm : 300
guide sleeve
travel mm : 1.69
Tolerance mm : + 0.15

Rated speed rpm : 1117
guide sleeve
travel mm : 10.38
Tolerance mm : + 0.20

Rated speed rpm : 746
guide sleeve
travel mm : 6.20
Tolerance mm : + 0.25

Rated speed rpm : 353
guide sleeve
travel mm : 2.45
Tolerance mm : + 0.25

Rated speed rpm : 403
guide sleeve
travel mm : 3.18
Tolerance mm : + 0.25

Rated speed rpm : 450
guide sleeve
travel mm : 3.66
Tolerance mm : + 0.25

Rated speed rpm : 1320
guide sleeve
travel mm : 13.50
Tolerance mm : + 0.50

GUIDE SLEEVE POSITION

Rated speed rpm : 1170

Rack travel in mm : 13.00
Tolerance mm : + 1.30

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1050
Aneroid pressure
hPa : 1600

Del. quantity
cm³/1000 strokes : 240.0

Tolerance
cm³/1000 strokes : + 1.0

Check tolerance
cm³/1000S. : + 4.0

Speed
Tolerance
cm³/1000 strokes : 5.0

Check tolerance
cm³/1000S. : 9.0

CONTROL LEVER

control lever
position degree : 121.0
tolerance degree : + 4.0

RATED SPEED

rack travel mm : 13.35
Rated speed rpm : 1080
Tolerance 1/min : + 5

rack travel mm : 4.00
Rated speed rpm : 1180
Tolerance 1/min : + 15

rack travel mm : 0.50
Tolerance mm : + 0.50
Rated speed rpm : 1300

LOW IDLE

control lever
position degree : 79.0

tolerance degree : + 4.0

Testing:

Rated speed rpm : 350
rack travel mm : 6.10
Tolerance mm : + 0.10

Rated speed rpm : 250

CRT mm min. : > 9.10

Rated speed rpm : 475

TORQUE CONTROL

Rated speed rpm : 1050
rack travel mm : 14.35
Tolerance mm : + 0.05

Rated speed rpm : 950
rack travel mm : 13.85
Tolerance mm : + 0.10

Rated speed rpm : 900
rack travel mm : 13.70
Tolerance mm : + 0.10

Rated speed rpm : 800
rack travel mm : 13.35
Tolerance mm : + 0.10

Rated speed rpm : 600
rack travel mm : 12.85
Tolerance mm : + 0.10

Rated speed rpm : 500
rack travel mm : 12.85
Tolerance mm : + 0.10

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 1050
Pressure hPa : 1600
rack travel mm : 14.35
Tolerance mm : + 0.05

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 1050
rack travel mm : 11.90
Tolerance mm : + 0.10

Rated speed rpm : 1050

Pressure hPa : 800
rack travel mm : 13.75
Tolerance mm : + 0.05

Pressure hPa : 650
rack travel mm : 12.95
Tolerance mm : + 0.10

START CUT-OUT

Rated speed rpm : > 100
Rated speed rpm : < 270

Check
speed 1/min : > 80
Check
speed 1/min : < 290

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 1600
Rated speed rpm : 800
Del. quantity
cm³/1000 strokes : 219.0
Tolerance
cm³/1000 strokes : + 3.0
Check tolerance
cm³/1000S. : + 6.0

Aneroid pressure
hPa : 1600
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 199.0
Tolerance
cm³/1000 strokes : + 3.0
Check tolerance
cm³/1000S. : + 6.0

Aneroid pressure
hPa : -
Rated speed rpm : 600
Del. quantity
cm³/1000 strokes : 185.0
Tolerance
cm³/1000 strokes : + 1.0
Check tolerance
cm³/1000S. : + 4.0
Spreed
Tolerance
cm³/1000 strokes : 8.0
Check tolerance
cm³/1000S. : 12.0

BREAKAWAY

Rack travel in mm : 13.35
Rated speed rpm : 1080
Tolerance 1/min : \pm 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 12.85
Tolerance mm : \pm 0.20
Del. quantity
cm³/1000 strokes : 155.0
Tolerance
cm³/1000 strokes : \pm 10.0
Check tolerance
cm³/1000S. : \pm 14.0

LOW IDLE

Rated speed rpm : 350
rack travel mm : 6.10
Tolerance mm : \pm 0.20
Del. quantity
cm³/1000 strokes : 25.0
Tolerance
cm³/1000 strokes : \pm 3.0
Check tolerance
cm³/1000S. : \pm 6.0
Spreed
Tolerance
cm³/1000 strokes : 6.0
Check tolerance
cm³/1000S. : 10.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 17.01.96
Test oil : ISO 4113
Combination No. : 0 402 846 067
Injection pump
Pump designation : PE6P120A320RS8015
EP type number : 0 412 826 016
Governor
Governor design. : RQV300...1050PA1225
Governor no. : 0 421 814 151

Cust. part No. : 11031773
: -P02 v.11/95

Customer-spec. information

Customer : VME
Motor : TD122KAE
Power KW : 243.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet
temp. °C : 40
Tolerance °C : + 2.0
Overflow valve : 2 417 413 078
Inlet press. bar : 2.5
Tolerance bar : + 0.1
Test nozzle holde
assembly : 1 688 901 103
Opening pressure
bar : 208.5
Tolerance bar : + 1.5
Test lines : 1 680 750 008

Outside diameter : 6.0
x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : + 1.0
Prestroke mm : 4.00
Tolerance mm : + 0.05
Check
tolerance mm : + 0.10
Rack travel in mm : 11.00
Tolerance mm : + 0.50
Firing order : 1- 5- 3- 6- 2-
: 4
Phasing : 0-60-120-180-240
: -300
Tolerance : + 0.30
Check
tolerance °NW : + 0.75
Start of delivery mark
Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700
Rack travel in mm : 9.30
Tolerance mm : + 0.05
Del. quantity
cm³/1000 strokes : 236.0
Tolerance
cm³/1000 strokes : + 1.0

Check tolerance
cm³/1000S. : ± 4.0

Spread
Tolerance
cm³/1000 strokes : 8.0

Check tolerance
cm³/1000S. : 11.0

Rated speed rpm : 325

Rack travel in mm : 3.80
Tolerance mm : ± 0.30

Del. quantity
cm³/1000 strokes : 23.0

Tolerance
cm³/1000 strokes : ± 3.0

Check tolerance
cm³/1000S. : ± 6.0

Spread
Tolerance
cm³/1000 strokes : 5.0

Check tolerance
cm³/1000S. : 8.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm : 325
guide sleeve
travel mm : 2.09
Tolerance mm : ± 0.25

Rated speed rpm : 1095
guide sleeve
travel mm : 7.90
Tolerance mm : ± 0.25

Rated speed rpm : 1028
guide sleeve
travel mm : 6.85
Tolerance mm : ± 0.25

Rated speed rpm : 387
guide sleeve
travel mm : 2.96
Tolerance mm : ± 0.25

Rated speed rpm : 437
guide sleeve
travel mm : 3.59
Tolerance mm : ± 0.25

Rated speed rpm : 520

guide sleeve
travel mm : 4.67
Tolerance mm : ± 0.25

Rated speed rpm : 1310
guide sleeve
travel mm : 11.50
Tolerance mm : ± 0.50

GUIDE SLEEVE POSITION

Rated speed rpm : 1190

Rack travel in mm : 9.50
Tolerance mm : ± 2.50

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 700
Aneroid pressure
hPa : 1500

Del. quantity
cm³/1000 strokes : 236.0

Tolerance
cm³/1000 strokes : ± 1.0

Check tolerance
cm³/1000S. : ± 4.0

Spread
Tolerance
cm³/1000 strokes : 8.0

Check tolerance
cm³/1000S. : 11.0

CONTROL LEVER

control lever
position degree : 61.0
tolerance degree : ± 4.0

control lever
position degree : 125.0
tolerance degree : ± 4.0

RATED SPEED

rack travel mm : 8.30
Rated speed rpm : 1105
Tolerance 1/min : ± 5

rack travel mm : 4.00
Rated speed rpm : 1165
Tolerance 1/min : ± 15

rack travel mm : 0.50
Tolerance mm : ± 0.50
Rated speed rpm : 1250

LOW IDLE

control lever
position degree : 74.0
tolerance degree : ± 4.0

control lever
position degree : 10.0
tolerance degree : ± 4.0

Testing:

Rated speed rpm : 325
rack travel mm : 3.80
Tolerance mm : ± 0.30

Rated speed rpm : 225
CRT mm min. : > 5.40

Rated speed rpm : 375

TORQUE CONTROL

Rated speed rpm : 700
rack travel mm : 9.30
Tolerance mm : ± 0.05

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1500
rack travel mm : 9.30
Tolerance mm : ± 0.05

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 500
rack travel mm : 7.80
Tolerance mm : ± 0.10

Rated speed rpm : 500

Pressure hPa : 520
rack travel mm : 1.30
Tolerance mm : ± 0.20

Pressure hPa : 290
rack travel mm : 0.25

H2O

Tolerance mm : ± 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : -
Rated speed rpm : 700
Del. quantity
cm³/1000 strokes : 188.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 4.0

BREAKAWAY

Rack travel in mm : 8.30
Rated speed rpm : 1105
Tolerance 1/min : ± 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.50
Tolerance mm : ± 0.50
Del. quantity
cm³/1000 strokes : 150.0
Tolerance
cm³/1000 strokes : ± 15.0
Check tolerance
cm³/1000S. : ± 19.0

LOW IDLE

Rated speed rpm : 325
rack travel mm : 3.80
Tolerance mm : ± 0.30
Del. quantity
cm³/1000 strokes : 23.0
Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 6.0
Spreed
Tolerance
cm³/1000 strokes : 5.0
Check tolerance
cm³/1000S. : 8.0

End of test specification sheet



BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 17.01.96
Test oil : ISO 4113

Combination No. : 0 402 846 070

Injection pump
Pump designation : PE6P120A320RS8040
EP type number : 0 412 826 034

Governor
Governor design. : RQV300...1050PA1247
Governor no. : 0 421 814 163

Cust. part No. : 11031221-P03v.01.96

Customer-spec. information
Customer : VME
Motor : TD 103 KCE
Power KW : 186.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet
temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Overflow quantity
min. L/h : 165
Tolerance L/h : + 10.0

Test nozzle holde
assembly : 1 688 901 103

Opening pressure
bar : 208.5
Tolerance bar : + 1.5

Test lines : 1 680 750 008
Outside diameter : 6.0
x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : + 1.0

Prestroke mm : 4.00
Tolerance mm : + 0.05
Check
tolerance mm : + 0.10

Rack travel in mm : 12.00
Tolerance mm : + 1.00

Firing order : 1- 5- 3- 6- 2-
: 4

Phasing : 0-60-120-180-240
: -300
Tolerance : + 0.30
Check
tolerance °NW : + 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 500

Rack travel in mm : 11.80
Tolerance mm : + 0.05

Del. quantity
cm³/1000 strokes : 318.0

<hr/>	
Tolerance	
cm ³ /1000 strokes	: + 1.0
<hr/>	
Check tolerance	
cm ³ /1000S.	: + 4.0
<hr/>	
Spreed	
Tolerance	
cm ³ /1000 strokes	: 8.0
<hr/>	
Check tolerance	
cm ³ /1000S.	: 11.0
<hr/>	
Rated speed rpm	: 320
<hr/>	
Rack travel in mm	: 5.20
Tolerance mm	: + 0.30
Del. quantity	
cm ³ /1000 strokes	: 50.0
Tolerance	
cm ³ /1000 strokes	: + 2.5
Check tolerance	
cm ³ /1000S.	: + 5.0
Spreed	
Tolerance	
cm ³ /1000 strokes	: 5.0
Check tolerance	
cm ³ /1000S.	: 8.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm	: 320
guide sleeve	
travel mm	: 1.34
Tolerance mm	: + 0.20
<hr/>	
Rated speed rpm	: 1112
guide sleeve	
travel mm	: 7.91
Tolerance mm	: + 0.15
<hr/>	
Rated speed rpm	: 806
guide sleeve	
travel mm	: 5.20
Tolerance mm	: + 0.25
<hr/>	
Rated speed rpm	: 530
guide sleeve	
travel mm	: 3.11
Tolerance mm	: + 0.25
<hr/>	
Rated speed rpm	: 1400
guide sleeve	
travel mm	: 11.50

H23

Tolerance mm : + 0.50

GUIDE SLEEVE POSITION

Rated speed rpm	: 1220
<hr/>	
Rack travel in mm	: 11.00
Tolerance mm	: + 2.00

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm	: 500
Aneroid pressure	
hPa	: 1500
Del. quantity	
cm ³ /1000 strokes	: 318.0
Tolerance	
cm ³ /1000 strokes	: + 1.0
Check tolerance	
cm ³ /1000S.	: + 4.0
Spreed	
Tolerance	
cm ³ /1000 strokes	: 8.0
Check tolerance	
cm ³ /1000S.	: 11.0

CONTROL LEVER

control lever	
position degree	: 45.0
tolerance degree	: + 4.0
<hr/>	
control lever	
position degree	: 112.0
tolerance degree	: + 4.0

RATED SPEED

rack travel mm	: 9.60
Rated speed rpm	: 1090
Tolerance 1/min	: + 5
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rack travel mm	: 4.00
Rated speed rpm	: 1170
Tolerance 1/min	: + 15
<hr/>	
rack travel mm	: 0.50
Tolerance mm	: + 0.50
Rated speed rpm	: 1250

LOW IDLE

control lever
position degree : 84.0
tolerance degree : ± 4.0

control lever
position degree : 17.0
tolerance degree : ± 4.0

Testing:

Rated speed rpm : 320
rack travel mm : 5.20
Tolerance mm : ± 0.10

Rated speed rpm : 220
CRT mm min. : > 7.80

Rated speed rpm : 380

TORQUE CONTROL

Rated speed rpm : 500
rack travel mm : 11.80
Tolerance mm : ± 0.05

Rated speed rpm : 1050
rack travel mm : 10.60
Tolerance mm : ± 0.10

Rated speed rpm : 720
rack travel mm : 10.90
Tolerance mm : ± 0.15

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1500
rack travel mm : 11.80
Tolerance mm : ± 0.05

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 500
rack travel mm : 8.70
Tolerance mm : ± 0.10

Rated speed rpm : 500

Pressure hPa : 900
rack travel mm : 2.80
Tolerance mm : ± 0.20

H24

Pressure hPa : 230
rack travel mm : 0.25
Tolerance mm : ± 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 1500
Rated speed rpm : 1050
Del. quantity
cm³/1000 strokes : 218.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 4.0

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 212.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 4.0

BREAKAWAY

Rack travel in mm : 9.60
Rated speed rpm : 1090
Tolerance 1/min : ± 5

LOW IDLE

Rated speed rpm : 320
rack travel mm : 5.20
Tolerance mm : ± 0.30
Del. quantity
cm³/1000 strokes : 50.0
Tolerance
cm³/1000 strokes : ± 2.5
Check tolerance
cm³/1000S. : ± 5.0
Speed
Tolerance
cm³/1000 strokes : 5.0
Check tolerance
cm³/1000S. : 8.0

End of test specification sheet



BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 17.01.96
Test oil : ISO 4113

Combination No. : 0 402 846 071

Injection pump
Pump designation : PE6P120A32ORS8040
EP type number : 0 412 862 034

Governor
Governor design. : RQV300...1100PA1248
Governor no. : 0 421 814 165

Cust. part No. : 11031229
: -P03 v.12.95

Customer-spec. information
Customer : VME
Motor : TD 103 KBE
Power KW : 214.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet
temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Test nozzle holde
assembly : 1 688 901 103

Opening pressure
bar : 208.5
Tolerance bar : + 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0
x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : + 1.0

Prestroke mm : 4.00
Tolerance mm : + 0.05
Check
tolerance mm : + 0.10

Rack travel in mm : 12.00
Tolerance mm : + 1.00

Firing order : 1- 5- 3- 6- 2-
: 4

Phasing : 0-60-120-180-240
: -300
Tolerance : + 0.30
Check
tolerance °NW : + 0.75

Start of delivery mark
Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 11.00
Tolerance mm : + 0.05

Del. quantity
cm3/1000 strokes : 270.0

Tolerance
cm3/1000 strokes : + 1.0

Check tolerance
cm³/1000S. : ± 4.0

Spreed
Tolerance
cm³/1000 strokes : 8.0

Check tolerance
cm³/1000S. : 11.0

Rated speed rpm : 330

Rack travel in mm : 4.20
Tolerance mm : ± 0.30

Del. quantity
cm³/1000 strokes : 29.0

Tolerance
cm³/1000 strokes : ± 2.5

Check tolerance
cm³/1000S. : ± 5.0

Spreed
Tolerance
cm³/1000 strokes : 5.0

Check tolerance
cm³/1000S. : 8.0

(B) SETTING OF INJECTION PUMP WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm : 330
guide sleeve
travel mm : 2.10
Tolerance mm : ± 0.20

Rated speed rpm : 1130
guide sleeve
travel mm : 7.55
Tolerance mm : ± 0.15

Rated speed rpm : 1077
guide sleeve
travel mm : 6.76
Tolerance mm : ± 0.25

Rated speed rpm : 520
guide sleeve
travel mm : 4.67
Tolerance mm : ± 0.25

Rated speed rpm : 1370
guide sleeve
travel mm : 11.50
Tolerance mm : ± 0.50

GUIDE SLEEVE POSITION

H27

Rated speed rpm : 1240

Rack travel in mm : 11.00
Tolerance mm : ± 1.50

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 700

Aneroid pressure
hPa : 1500

Del. quantity
cm³/1000 strokes : 270.0

Tolerance
cm³/1000 strokes : ± 1.0

Check tolerance
cm³/1000S. : ± 4.0

Spreed
Tolerance
cm³/1000 strokes : 8.0

Check tolerance
cm³/1000S. : 11.0

CONTROL LEVER

control lever
position degree : 56.0
tolerance degree : ± 4.0

control lever
position degree : 117.0
tolerance degree : ± 4.0

RATED SPEED

rack travel mm : 10.00
Rated speed rpm : 1130
Tolerance 1/min : ± 5

rack travel mm : 4.00
Rated speed rpm : 1200
Tolerance 1/min : ± 15

rack travel mm : 0.50
Tolerance mm : ± 0.50
Rated speed rpm : 1275

LOW IDLE

control lever
position degree : 66.0
tolerance degree : ± 4.0

control lever
position degree : 11.0
tolerance degree : +- 4.0

Testing:

Rated speed rpm : 330
rack travel mm : 4.20
Tolerance mm : +- 0.10

Rated speed rpm : 230

CRT mm min. : > 6.00

Rated speed rpm : 400

TORQUE CONTROL

Rated speed rpm : 700
rack travel mm : 11.00
Tolerance mm : +- 0.05

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1500
rack travel mm : 11.00
Tolerance mm : +- 0.05

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 500
rack travel mm : 8.60
Tolerance mm : +- 0.10

Rated speed rpm : 500

Pressure hPa : 540
rack travel mm : 2.00
Tolerance mm : +- 0.20

Pressure hPa : 240
rack travel mm : 0.25
Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : -

H28

Rated speed rpm : 700
Del. quantity
cm³/1000 strokes : 202.0
Tolerance
cm³/1000 strokes : +- 1.0
Check tolerance
cm³/1000S. : +- 4.0

BREAKAWAY

Rack travel in mm : 10.00
Rated speed rpm : 1130
Tolerance 1/min : +- 5

LOW IDLE

Rated speed rpm : 330
rack travel mm : 4.20
Tolerance mm : +- 0.30
Del. quantity
cm³/1000 strokes : 29.0
Tolerance
cm³/1000 strokes : +- 2.5
Check tolerance
cm³/1000S. : +- 5.0
Spreed
Tolerance
cm³/1000 strokes : 5.0
Check tolerance
cm³/1000S. : 8.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 17.01.96
Test oil : ISO 4113
Combination No. : 0 402 846 300
Injection pump
Pump designation : PE6P120A32ORS8504
EP type number : 0 412 816 200
Governor
Governor design. : RQV275...1000PA1099K
Governor no. : 0 421 815 983
Cust. part No. : 1287579/4

Customer-spec. information

Customer : DAF
Motor : WS 315 M
Power KW : 315.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2
Test oil inlet temp. °C : 40
Tolerance °C : ± 2.0
Overflow valve : 1 417 413 025
Inlet press. bar : 1.5
Tolerance bar : ± 0.1
Overflow quantity min. l/h : 180
Test nozzle holde assembly : 1 688 901 105
Opening pressure bar : 208.5
Tolerance bar : ± 1.5

Test Lines : 1 680 750 089
Outside diameter : 8.0
x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0
Prestroke mm : 5.35
Tolerance mm : ± 0.05
Check tolerance mm : ± 0.10
Rack travel in mm : 10.50
Tolerance mm : ± 1.50
Firing order : 1- 5- 3- 6- 2-
: 4
Phasing : 0-60-120-180-240
: -300
Tolerance : ± 0.30
Check tolerance °NW : ± 0.50

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 980
Rack travel in mm : 13.35
Tolerance mm : ± 0.05
Del. quantity cm³/1000 strokes : 321.5

Tolerance
 cm³/1000 strokes : ± 1.0

 Check tolerance
 cm³/1000S. : ± 6.0

 Spread
 Tolerance
 cm³/1000 strokes : 8.0

 Check tolerance
 cm³/1000S. : 14.0

 Rated speed rpm : 275

 Rack travel in mm : 5.80
 Tolerance mm : ± 0.10
 Del. quantity
 cm³/1000 strokes : 13.0
 Tolerance
 cm³/1000 strokes : ± 3.0
 Check tolerance
 cm³/1000S. : ± 6.0
 Spread
 Tolerance
 cm³/1000 strokes : 8.0
 Check tolerance
 cm³/1000S. : 14.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm : 250
 guide sleeve
 travel mm : 1.53
 Tolerance mm : ± 0.15

 Rated speed rpm : 1050
 guide sleeve
 travel mm : 9.89
 Tolerance mm : ± 0.20

 Rated speed rpm : 692
 guide sleeve
 travel mm : 6.45
 Tolerance mm : ± 0.25

 Rated speed rpm : 284
 guide sleeve
 travel mm : 2.27
 Tolerance mm : ± 0.25

 Rated speed rpm : 334
 guide sleeve
 travel mm : 3.08
 Tolerance mm : ± 0.25

Rated speed rpm : 400
 guide sleeve
 travel mm : 3.92
 Tolerance mm : ± 0.25

 Rated speed rpm : 1310
 guide sleeve
 travel mm : 13.50
 Tolerance mm : ± 0.50

GUIDE SLEEVE POSITION

Rated speed rpm : 1130

 Rack travel in mm : 12.70
 Tolerance mm : ± 1.30

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 980
 Aneroid pressure
 hPa : -
 Del. quantity
 cm³/1000 strokes : 321.5
 Tolerance
 cm³/1000 strokes : ± 1.0
 Check tolerance
 cm³/1000S. : ± 6.0
 Spread
 Tolerance
 cm³/1000 strokes : 8.0
 Check tolerance
 cm³/1000S. : 14.0

CONTROL LEVER

control lever
 position degree : 120.0
 tolerance degree : ± 4.0

RATED SPEED

rack travel mm : 12.35
 Rated speed rpm : 1037
 Tolerance 1/min : ± 5

 rack travel mm : 4.00
 Rated speed rpm : 1150
 Tolerance 1/min : ± 15

 rack travel mm : 0.70
 Tolerance mm : ± 0.70
 Rated speed rpm : 1275

LOW IDLE

control lever
position degree : 76.0
tolerance degree : +- 4.0

Testing:

Rated speed rpm : 275
rack travel mm : 5.80
Tolerance mm : +- 0.10

rack travel mm : 2.00
Rated speed rpm : 405
Tolerance 1/min : +- 30

Rated speed rpm : 175

CRT mm min. : > 8.00

TORQUE CONTROL

Rated speed rpm : 980
rack travel mm : 13.35
Tolerance mm : +- 0.05

Rated speed rpm : 750
rack travel mm : 12.75
Tolerance mm : +- 0.05

Rated speed rpm : 600
rack travel mm : 12.05
Tolerance mm : +- 0.10

Rated speed rpm : 500
rack travel mm : 12.00
Tolerance mm : +- 0.10

Rated speed rpm : 400
rack travel mm : 11.95
Tolerance mm : +- 0.10

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 980
Pressure hPa : 1500
rack travel mm : 13.35
Tolerance mm : +- 0.05

MEASUREMENT

Pressure hPa : 750
Rated speed rpm : 980
rack travel mm : 12.25
Tolerance mm : +- 0.05

Rated speed rpm : 980

Pressure hPa : -
rack travel mm : 8.90
Tolerance mm : +- 0.10

Pressure hPa : 420
rack travel mm : 10.00
Tolerance mm : +- 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : -
Rated speed rpm : 750
Del. quantity
cm³/1000 strokes : 316.0
Tolerance

cm³/1000 strokes : +- 2.0
Check tolerance
cm³/1000S. : +- 8.0

Spreed
Tolerance
cm³/1000 strokes : 8.0
Check tolerance
cm³/1000S. : 14.0

Aneroid pressure
hPa : -
Rated speed rpm : 600
Del. quantity
cm³/1000 strokes : 188.0
Tolerance
cm³/1000 strokes : +- 1.0
Check tolerance
cm³/1000S. : +- 6.0

BREAKAWAY

Rack travel in mm : 12.35
Rated speed rpm : 1037
Tolerance 1/min : +- 5

LOW IDLE

Rated speed rpm : 275
rack travel mm : 5.80
Tolerance mm : +- 0.10
Del. quantity
cm³/1000 strokes : 13.0
Tolerance
cm³/1000 strokes : +- 3.0
Check tolerance
cm³/1000S. : +- 6.0
Speed
Tolerance
cm³/1000 strokes : 8.0
Check tolerance
cm³/1000S. : 14.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 17.01.96
Test oil : ISO 4113
Combination No. : 0 403 446 231
Injection pump
Pump designation : PES6MW100/720RS1144
EP type number : 0 413 406 138
Governor
Governor design. : RQV300...1400MW48-8
Governor no. : 0 420 083 175

Cust. part No. :

Customer-spec. information
Customer : MB-NFZ
Motor : OM 366 A
Power KW : 125.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet temp. °C : 40
Tolerance °C : +- 2.0
Overflow valve : 1 417 413 047
Inlet press. bar : 1.5
Test nozzle holder assembly : 1 688 901 101
Opening pressure bar : 208.5
Tolerance bar : +- 1.5
Test Lines : 1 680 715 015
Outside diameter : 6.0

J05

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0
Tolerance bar : +- 1.0

Prestroke mm : 3.55
Tolerance mm : +- 0.05
Check tolerance mm : +- 0.10

Rack travel in mm : 10.50
Tolerance mm : +- 1.50

Firing order : 1- 5- 3- 6- 2-
: 4

Phasing : 0-60-120-180-240
: -300
Tolerance : +- 0.50
Check tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm : 10.95
Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 75.0

Tolerance cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000S. : +- 3.0

Speed Tolerance cm3/1000 strokes : 3.5

Check tolerance
 cm³/1000S. : 6.0
 Rated speed rpm : 300
 Rack travel in mm : 8.55
 Tolerance mm : + 0.25
 Del. quantity
 cm³/1000 strokes : 11.0
 Tolerance
 cm³/1000 strokes : + 2.0
 Check tolerance
 cm³/1000S. : + 4.5
 Spreed
 Tolerance
 cm³/1000 strokes : 3.5
 Check tolerance
 cm³/1000S. : 5.5

(B) SETTING OF INJECTION PUMP
 WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm : 300
 guide sleeve
 travel mm : 1.22
 Tolerance mm : + 0.20
 Rated speed rpm : 1453
 guide sleeve
 travel mm : 8.30
 Tolerance mm : + 0.15
 Rated speed rpm : 594
 guide sleeve
 travel mm : 3.30
 Tolerance mm : + 0.25
 Rated speed rpm : 400
 guide sleeve
 travel mm : 2.30
 Tolerance mm : + 0.25
 Rated speed rpm : 1770
 guide sleeve
 travel mm : 11.50
 Tolerance mm : + 0.50

GUIDE SLEEVE POSITION

Rated speed rpm : 1500
 Rack travel in mm : 10.00
 Tolerance mm : + 2.70

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1400
 Aneroid pressure
 hPa : -
 Del. quantity
 cm³/1000 strokes : 75.0
 Tolerance
 cm³/1000 strokes : + 1.0
 Check tolerance
 cm³/1000S. : + 3.0
 Spreed
 Tolerance
 cm³/1000 strokes : 3.5
 Check tolerance
 cm³/1000S. : 6.0

CONTROL LEVER

control lever
 position degree : 111.0
 tolerance degree : + 4.0

RATED SPEED

rack travel mm : 9.90
 Rated speed rpm : 1445
 Tolerance 1/min : + 5
 rack travel mm : 4.00
 Rated speed rpm : 1550
 Tolerance 1/min : + 15
 rack travel mm : 0.50
 Tolerance mm : + 0.50
 Rated speed rpm : 1650

LOW IDLE

control lever
 position degree : 81.0
 tolerance degree : + 4.0

Testing:

Rated speed rpm : 300
 rack travel mm : 8.55
 Tolerance mm : + 0.25
 Rated speed rpm : 200
 CRT mm min. : > 9.50

TORQUE CONTROL

Rated speed rpm : 1400
rack travel mm : 10.95
Tolerance mm : \pm 0.05

Rated speed rpm : 750
rack travel mm : 12.20
Tolerance mm : \pm 0.10

Rated speed rpm : 950
rack travel mm : 11.95
Tolerance mm : \pm 0.15

Rated speed rpm : 1200
rack travel mm : 11.15
Tolerance mm : \pm 0.15

START CUT-OUT

Rated speed rpm : > 100
Rated speed rpm : < 200

Check speed 1/min : > 80
Check speed 1/min : < 230

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : -
Rated speed rpm : 750
Del. quantity
cm³/1000 strokes : 76.5
Tolerance
cm³/1000 strokes : \pm 1.5
Check tolerance
cm³/1000S. : \pm 4.0
Spreed
Tolerance
cm³/1000 strokes : 5.0
Check tolerance
cm³/1000S. : 7.0

BREAKAWAY

Rack travel in mm : 9.90
Rated speed rpm : 1445
Tolerance 1/min : \pm 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 19.50
Tolerance mm : \pm 1.50
Del. quantity
cm³/1000 strokes : 85.0
Tolerance
cm³/1000 strokes : \pm 5.0
Check tolerance
cm³/1000S. : \pm 8.0

LOW IDLE

Rated speed rpm : 300
rack travel mm : 8.55
Tolerance mm : \pm 0.25
Del. quantity
cm³/1000 strokes : 11.0
Tolerance
cm³/1000 strokes : \pm 2.0
Check tolerance
cm³/1000S. : \pm 4.5
Spreed
Tolerance
cm³/1000 strokes : 3.5
Check tolerance
cm³/1000S. : 5.5

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 31.01.96
Test oil : ISO 4113

Combination No. : 0 400 074 090

Injection pump
Pump designation : PES4M55C320RS175
EP type number : 0 410 054 957

Governor
Governor design. : RSV350...1650MOC353
: -13
Governor no. : 0 420 033 050

Cust. part No. :

Customer-spec. information
Customer : MB-NFZ
Motor : OM601 (2,3L)
Power KW : 50.0

TEST BENCH REQUIREMENTS

Test oil inlet
temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 469 990 351

Inlet press. bar : 1.0

Test nozzle holde
assembly : 1 688 901 111

Opening pressure
bar : 148.5
Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0
x inside diameter : 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : +- 1.0

Prestroke mm : 2.05
Tolerance mm : +- 0.05
Check
tolerance mm : +- 0.10

Rack travel in mm : 21.00
Tolerance mm : +- 1.00

Firing order : 1- 3- 4- 2

Phasing : 0-90-180-270

BASIC SETTING

Rated speed rpm : 1630

Rack travel in mm : 11.85
Tolerance mm : +- 0.05

Del. quantity
cm³/1000 strokes : 39.5

Tolerance
cm³/1000 strokes : +- 0.5

Check tolerance
cm³/1000S. : +- 1.5

Spreed
Tolerance
cm³/1000 strokes : 2.5

Check tolerance
cm³/1000S. : 3.0

Rated speed rpm : 350
Del. quantity
cm³/1000 strokes : 7.0
Tolerance
cm³/1000 strokes : +- 1.0

Spreed
Tolerance
cm³/1000 strokes : 1.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800
Rack travel in mm : 0.65
Tolerance mm : ± 0.35

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1630
Ref. pressure
ALDA / ADA hPa : -
Del. quantity
cm³/1000 strokes : 39.5
Tolerance
cm³/1000 strokes : ± 0.5
Check tolerance
cm³/1000S. : ± 1.5
Spreed
Tolerance
cm³/1000 strokes : 2.5
Check tolerance
cm³/1000S. : 3.0

RATED SPEED

control lever
position degree : 106.0
rack travel mm : 1.00
Tolerance mm : ± 0.70
Rated speed rpm : 2000

LOW IDLE

control lever
position degree : 70.0
tolerance degree : ± 4.0

SET IDLE AUXILIARY SPRING

Rated speed rpm : 350
rack travel mm : 5.40
Tolerance mm : ± 0.10

Load pick-up

Rated speed rpm : 100
CRT mm min. : > 20.10
rack travel mm : 5.40
Rated speed rpm : 350

SET IDLE AUXILIARY SPRING

Rated speed rpm : 100

TORQUE CONTROL

Rated speed rpm : 1630
rack travel mm : 11.85
Tolerance mm : ± 0.05
Rated speed rpm : 1000
rack travel mm : 11.80
Tolerance mm : ± 0.10

FUEL DELIVERY CHARACTERISTICS

Ref. pressure
ALDA / ADA hPa : -
Rated speed rpm : 1000
Del. quantity
cm³/1000 strokes : 38.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 2.0
Spreed
Tolerance
cm³/1000 strokes : 2.5
Check tolerance
cm³/1000S. : 3.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.10
Del. quantity
cm³/1000 strokes : 54.0
Spreed
Tolerance
cm³/1000 strokes : 6.0
Check tolerance
cm³/1000S. : 6.0

LOW IDLE

Rated speed rpm : 350
rack travel mm : 5.60
Tolerance mm : \pm 0.30
Del. quantity
cm³/1000 strokes : 7.8
Check tolerance
cm³/1000S. : \pm 2.3
Spreed
Check tolerance
cm³/1000S. : 1.5

SETTING PNEUMATIC FAST IDLE (ELA)

control lever
position degree : 70.0
tolerance degree : \pm 4.0

SETTING/TESTING ELECTRONIC IDLE
REGULATION (ELR)

control lever
position degree : 70.0
tolerance degree : \pm 4.0

control lever
position degree : 106.0

ADJUSTMENT

control lever
position degree : 106.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 31.01.96
Test oil : ISO 4113
Combination No. : 0 401 846 958
Injection pump
Pump designation : PE6P120A72ORS3291
EP type number : 0 411 826 800
Governor
Governor design. : RQV300...1000PA1016
Governor no. : 0 421 813 964

Cust. part No. :

Customer-spec. information
Customer : IVECO-UNIC
Motor : 8210.22.521

TEST BENCH REQUIREMENTS

Inlet line : 4.2
Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0
Overflow valve : 1 417 413 025
Inlet press. bar : 1.5
Tolerance bar : ± 0.1
Test nozzle holde
assembly : 1 688 901 019
Opening pressure
bar : 208.5
Tolerance bar : ± 1.5
Test lines : 1 680 750 075
Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0
Prestroke mm : 3.55
Tolerance mm : ± 0.05
Check
tolerance mm : ± 0.10
Rack travel in mm : 10.50
Tolerance mm : ± 1.50
Firing order : 1- 5- 3- 6- 2-
: 4
Phasing : 0-60-120-180-240
: -300
Tolerance : ± 0.30
Check
tolerance °NW : ± 0.50

BASIC SETTING

Rated speed rpm : 1000
Rack travel in mm : 11.05
Tolerance mm : ± 0.05
Del. quantity
cm³/1000 strokes : 226.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 4.0
Speed
Tolerance
cm³/1000 strokes : 5.0

Check tolerance
cm³/1000S. : 9.0

Rated speed rpm : 300

Rack travel in mm : > 4.00
Tolerance mm : + 0.20

Del. quantity
cm³/1000 strokes : 22.0
Tolerance
cm³/1000 strokes : + 3.0

Check tolerance
cm³/1000S. : + 6.0

Spread
Tolerance
cm³/1000 strokes : 8.0
Check tolerance
cm³/1000S. : 12.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm : 300
guide sleeve
travel mm : 1.34
Tolerance mm : + 0.20

Rated speed rpm : 1059
guide sleeve
travel mm : 8.50
Tolerance mm : + 0.15

Rated speed rpm : 712
guide sleeve
travel mm : 5.48
Tolerance mm : + 0.25

Rated speed rpm : 440
guide sleeve
travel mm : 3.44
Tolerance mm : + 0.25

Rated speed rpm : 1270
guide sleeve
travel mm : 11.50
Tolerance mm : + 0.50

GUIDE SLEEVE POSITION

Rated speed rpm : 1130

Rack travel in mm : 11.00
Tolerance mm : + 2.70

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1000
Aneroid pressure
hPa : 700

Del. quantity
cm³/1000 strokes : 226.0
Tolerance
cm³/1000 strokes : + 1.0

Check tolerance
cm³/1000S. : + 4.0

Spread
Tolerance
cm³/1000 strokes : 5.0
Check tolerance
cm³/1000S. : 9.0

CONTROL LEVER

control lever
position degree : 116.0
tolerance degree : + 4.0

RATED SPEED

rack travel mm : 10.00
Rated speed rpm : 1045
Tolerance 1/min : + 5

rack travel mm : 4.00
Rated speed rpm : 1140
Tolerance 1/min : + 15

rack travel mm : 0.50
Tolerance mm : + 0.50
Rated speed rpm : 1250

LOW IDLE

control lever
position degree : 65.0
tolerance degree : + 4.0

Testing:

Rated speed rpm : 300
rack travel mm : 4.00
Tolerance mm : + 0.10

Rated speed rpm : 100

CRT mm min. : > 6.00

Rated speed rpm : 360

TORQUE CONTROL

Rated speed rpm : 1000
rack travel mm : 11.05
Tolerance mm : ± 0.05

Rated speed rpm : 500
rack travel mm : 11.10
Tolerance mm : ± 0.10

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 700
rack travel mm : 11.05
Tolerance mm : ± 0.05

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 180
rack travel mm : 9.35
Tolerance mm : ± 0.15

Pressure hPa : 220
rack travel mm : 10.35
Tolerance mm : ± 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 700
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 226.0
Tolerance
cm³/1000 strokes : ± 2.0
Check tolerance
cm³/1000S. : ± 5.0

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 156.0
Tolerance
cm³/1000 strokes : ± 1.0

Check tolerance
cm³/1000S. : ± 4.0

BREAKAWAY

Rack travel in mm : 10.00
Rated speed rpm : 1045
Tolerance 1/min : ± 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm³/1000 strokes : 250.0
Tolerance
cm³/1000 strokes : ± 10.0
Check tolerance
cm³/1000S. : ± 14.0

LOW IDLE

Rated speed rpm : 300
rack travel mm : > 4.00
Tolerance mm : ± 0.20
Del. quantity
cm³/1000 strokes : 22.0
Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 6.0
Speed
Tolerance
cm³/1000 strokes : 8.0
Check tolerance
cm³/1000S. : 12.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 31.01.96
Test oil : ISO 4113
Combination No. : 0 401 876 747
Injection pump
Pump designation : PE6P110A32ORS3162
EP type number : 0 411 816 748
Governor
Governor design. : RSV200...900P1/421
Governor no. : 0 421 833 132
Cust. part No. : 849194 P03 v. 6/95

Customer-spec. information
Customer : VOLVO-PENTA
Motor : TMD 100 C
Power KW : 177.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2
Vibration damper (RoBo diaphragm) : 4.1
Test oil inlet temp. °C : 40
Tolerance °C : + 2.0
Overflow valve : 2 417 413 077
Inlet press. bar : 1.5
Test nozzle holder assembly : 0 681 343 009
Opening pressure bar : 173.5
Tolerance bar : + 1.5

Test lines : 1 680 750 089
Outside diameter : 8.0
x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : + 1.0
Prestroke mm : 3.55
Tolerance mm : + 0.05
Check tolerance mm : + 0.10
Rack travel in mm : 10.50
Tolerance mm : + 1.50
Firing order : 1- 5- 3- 6- 2-
: 4
Phasing : 0-60-120-180-240
: -300
Tolerance : + 0.30
Check tolerance °NW : + 0.50
Start of delivery mark
Tolerance : + 0.50
Check tolerance °NW : + 0.75
Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700
Rack travel in mm : 12.25
Tolerance mm : + 0.05

Del. quantity
cm³/1000 strokes : 154.0

Tolerance
cm³/1000 strokes : +- 1.0

Check tolerance
cm³/1000S. : +- 4.0

Spreed
Tolerance
cm³/1000 strokes : 4.0

Check tolerance
cm³/1000S. : 7.5

Rated speed rpm : 250

Rack travel in mm : 6.70
Tolerance mm : +- 0.20

Del. quantity
cm³/1000 strokes : 20.0
Tolerance
cm³/1000 strokes : +- 2.0
Check tolerance
cm³/1000S. : +- 4.5

Spreed
Tolerance
cm³/1000 strokes : 3.0
Check tolerance
cm³/1000S. : 6.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800

Rack travel in mm : 0.50
Tolerance mm : +- 0.20

governor spring
pre-tension
click setting x : 4.00

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 700
Aneroid pressure
hPa : -
Del. quantity
cm³/1000 strokes : 154.0
Tolerance
cm³/1000 strokes : +- 1.0

Check tolerance
cm³/1000S. : +- 4.0
Spreed
Tolerance
cm³/1000 strokes : 4.0
Check tolerance
cm³/1000S. : 7.5

CONTROL LEVER

control lever
position degree : 96.0
tolerance degree : +- 4.0

control lever
position degree : 46.0
tolerance degree : +- 4.0

RATED SPEED

rack travel mm : 11.20
Rated speed rpm : 945
Tolerance 1/min : +- 5

rack travel mm : 4.00
Rated speed rpm : 985
Tolerance 1/min : +- 15

rack travel mm : 0.85
Tolerance mm : +- 0.55
Rated speed rpm : 1140

LOW IDLE

control lever
position degree : 19.0
tolerance degree : +- 4.0

control lever
position degree : 69.0
tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 250
rack travel mm : 6.20

Testing:

Rated speed rpm : 250
rack travel mm : 6.70
Tolerance mm : +- 0.10

rack travel mm : 2.00
Rated speed rpm : 360

Tolerance 1/min : + 30

End of test specification sheet

TORQUE CONTROL

Rated speed rpm : 700
rack travel mm : 12.25
Tolerance mm : + 0.05

BREAKAWAY

Rack travel in mm : 11.20
Rated speed rpm : 945
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.50
Tolerance mm : + 0.50
Del. quantity
cm³/1000 strokes : 150.0
Tolerance
cm³/1000 strokes : + 10.0
Check tolerance
cm³/1000S. : + 10.0

LOW IDLE

Rated speed rpm : 250
rack travel mm : 6.70
Tolerance mm : + 0.20
Del. quantity
cm³/1000 strokes : 20.0
Tolerance
cm³/1000 strokes : + 2.0
Check tolerance
cm³/1000S. : + 4.5
Speed
Tolerance
cm³/1000 strokes : 3.0
Check tolerance
cm³/1000S. : 6.0

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 29.01.96
Test oil : ISO 4113

Combination No. : 0 401 876 811

Injection pump
Pump designation : PE6P120A32ORS3313
EP type number : 0 411 826 807

Governor
Governor design. : RSV350...1050P8A558
 : -4
Governor no. : 0 421 833 516

Cust. part No. : 1379584

Customer-spec. information
Customer : SCANIA
Motor : DSC943A

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration damper
(RoBo diaphragm) : 4.2

Test oil inlet temp. °C : 40
Tolerance °C : ± 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5
Tolerance bar : ± 0.1

Test nozzle holder assembly : 1 688 901 104

Opening pressure bar : 251.5
Tolerance bar : ± 1.5

Test lines : 1 680 750 008
Outside diameter : 6.0
x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0

Prestroke mm : 4.45
Tolerance mm : ± 0.05
Check tolerance mm : ± 0.10

Rack travel in mm : 10.50
Tolerance mm : ± 1.50

Firing order : 1- 5- 3- 6- 2-
 : 4

Phasing : 0-60-120-180-240
 : -300
Tolerance : ± 0.30
Check tolerance °NW : ± 0.50

Start of delivery mark
Tolerance : ± 0.50
Check tolerance °NW : ± 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm	:	12.75
Tolerance mm	:	+ 0.05
<hr/>		
Del. quantity		
cm ³ /1000 strokes	:	174.0
<hr/>		
Tolerance		
cm ³ /1000 strokes	:	+ 1.0
<hr/>		
Check tolerance		
cm ³ /1000S.	:	+ 4.0
<hr/>		
Spreed		
Tolerance		
cm ³ /1000 strokes	:	8.0
<hr/>		
Check tolerance		
cm ³ /1000S.	:	12.0
<hr/>		
Rated speed rpm	:	350
<hr/>		
Rack travel in mm	:	5.10
Tolerance mm	:	+ 0.30
Del. quantity		
cm ³ /1000 strokes	:	18.0
Tolerance		
cm ³ /1000 strokes	:	+ 3.0
Check tolerance		
cm ³ /1000S.	:	+ 6.0
Spreed		
Tolerance		
cm ³ /1000 strokes	:	4.0
Check tolerance		
cm ³ /1000S.	:	8.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm	:	800
<hr/>		
Rack travel in mm	:	0.50
Tolerance mm	:	+ 0.20
<hr/>		
governor spring		
pre-tension		
click setting x	:	6.00

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm	:	700
Aneroid pressure		
hPa	:	-

Del. quantity		
cm ³ /1000 strokes	:	174.0
Tolerance		
cm ³ /1000 strokes	:	+ 1.0
Check tolerance		
cm ³ /1000S.	:	+ 4.0
Spreed		
Tolerance		
cm ³ /1000 strokes	:	8.0
Check tolerance		
cm ³ /1000S.	:	12.0

CONTROL LEVER

control lever		
position degree	:	58.0
tolerance degree	:	+ 4.0
<hr/>		
control lever		
position degree	:	108.0
tolerance degree	:	+ 4.0

RATED SPEED

rack travel mm	:	11.00
Rated speed rpm	:	1095
Tolerance 1/min	:	+ 5
<hr/>		
rack travel mm	:	4.00
Rated speed rpm	:	1165
Tolerance 1/min	:	+ 15
<hr/>		
rack travel mm	:	0.85
Tolerance mm	:	+ 0.55
Rated speed rpm	:	1300

LOW IDLE

control lever		
position degree	:	77.0
tolerance degree	:	+ 4.0
<hr/>		
control lever		
position degree	:	28.0
tolerance degree	:	+ 4.0

Setting point w/out bumper spring

Rated speed rpm	:	350
rack travel mm	:	4.60

Testing:

Rated speed rpm	:	350
rack travel mm	:	5.10

Tolerance mm : + 0.10
rack travel mm : 2.00
Rated speed rpm : 550
Tolerance 1/min : + 30

TORQUE CONTROL

Rated speed rpm : 700
rack travel mm : 12.75
Tolerance mm : + 0.05

Rated speed rpm : 1050
rack travel mm : 12.75
Tolerance mm : + 0.05

Rated speed rpm : 900
rack travel mm : 13.45
Tolerance mm : + 0.10

Rated speed rpm : 975
rack travel mm : 13.05
Tolerance mm : + 0.15

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1500
rack travel mm : 12.75
Tolerance mm : + 0.05

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 500
rack travel mm : 10.50
Tolerance mm : + 0.20

Rated speed rpm : 500

Pressure hPa : 230
rack travel mm : 10.95
Tolerance mm : + 0.15

Pressure hPa : 310
rack travel mm : 11.35
Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : -
Rated speed rpm : 1050
Del. quantity
cm³/1000 strokes : 154.0
Tolerance
cm³/1000 strokes : + 4.0
Check tolerance
cm³/1000S. : + 6.0

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 114.0
Tolerance
cm³/1000 strokes : + 1.0
Check tolerance
cm³/1000S. : + 4.0

BREAKAWAY

Rack travel in mm : 11.00
Rated speed rpm : 1095
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 10.50
Tolerance mm : + 0.20
Del. quantity
cm³/1000 strokes : 100.0
Tolerance
cm³/1000 strokes : + 20.0
Check tolerance
cm³/1000S. : + 24.0

LOW IDLE

Rated speed rpm : 350
rack travel mm : 5.10
Tolerance mm : + 0.30
Del. quantity
cm³/1000 strokes : 18.0
Tolerance
cm³/1000 strokes : + 3.0
Check tolerance
cm³/1000S. : + 6.0
Speed
Tolerance
cm³/1000 strokes : 4.0

Check tolerance
cm³/1000S. : 8.0

End of test specification sheet



BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 30.01.96
Test oil : ISO 4113

Combination No. : 0 401 876 812

Injection pump
Pump designation : PE6P120A32ORS3313
EP type number : 0 411 826 807

Governor
Governor design. : RSV350...1050P8A558
: -5
Governor no. : 0 421 833 517

Cust. part No. : 1379537

Customer-spec. information
Customer : SCANIA
Motor : DSC943A

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration damper (RoBo diaphragm) : 4.2

Test oil inlet temp. °C : 40
Tolerance °C : ± 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5
Tolerance bar : ± 0.1

Test nozzle holder assembly : 1 688 901 104

Opening pressure bar : 251.5
Tolerance bar : ± 1.5

Test Lines : 1 680 750 008
Outside diameter : 6.0
x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0

Prestroke mm : 4.45
Tolerance mm : ± 0.05
Check tolerance mm : ± 0.10

Rack travel in mm : 10.50
Tolerance mm : ± 1.50

Firing order : 1- 5- 3- 6- 2-
: 4

Phasing : 0-60-120-180-240
: -300
Tolerance : ± 0.30
Check tolerance °NW : ± 0.50

Start of delivery mark
Tolerance : ± 0.50
Check tolerance °NW : ± 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm :	13.85
Tolerance mm :	+ 0.05
<hr/>	
Del. quantity cm ³ /1000 strokes :	204.0
<hr/>	
Tolerance cm ³ /1000 strokes :	+ 1.0
<hr/>	
Check tolerance cm ³ /1000S. :	+ 4.0
<hr/>	
Spreed Tolerance cm ³ /1000 strokes :	8.0
<hr/>	
Check tolerance cm ³ /1000S. :	12.0
<hr/>	
Rated speed rpm :	350
<hr/>	
Rack travel in mm :	5.10
Tolerance mm :	+ 0.30
Del. quantity cm ³ /1000 strokes :	18.0
Tolerance cm ³ /1000 strokes :	+ 3.0
Check tolerance cm ³ /1000S. :	+ 6.0
<hr/>	
Spreed Tolerance cm ³ /1000 strokes :	4.0
Check tolerance cm ³ /1000S. :	8.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm :	800
<hr/>	
Rack travel in mm :	0.50
Tolerance mm :	+ 0.20
<hr/>	
governor spring pre-tension click setting x :	6.00

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm :	700
Aneroid pressure hPa :	-

Del. quantity cm ³ /1000 strokes :	204.0
Tolerance cm ³ /1000 strokes :	+ 1.0
Check tolerance cm ³ /1000S. :	+ 4.0
<hr/>	
Spreed Tolerance cm ³ /1000 strokes :	8.0
Check tolerance cm ³ /1000S. :	12.0

CONTROL LEVER

control lever position degree :	62.0
tolerance degree :	+ 4.0
<hr/>	
control lever position degree :	112.0
tolerance degree :	+ 4.0

RATED SPEED

rack travel mm :	11.70
Rated speed rpm :	1095
Tolerance 1/min :	+ 5
<hr/>	
rack travel mm :	4.00
Rated speed rpm :	1175
<hr/>	
rack travel mm :	0.85
Tolerance mm :	+ 0.55
Rated speed rpm :	1300

LOW IDLE

control lever position degree :	77.0
tolerance degree :	+ 4.0
<hr/>	
control lever position degree :	28.0
tolerance degree :	+ 4.0

Setting point w/out bumper spring

Rated speed rpm :	350
rack travel mm :	4.60

Testing:

Rated speed rpm :	350
rack travel mm :	5.10
Tolerance mm :	+ 0.10

TORQUE CONTROL

Rated speed rpm : 700
rack travel mm : 13.85
Tolerance mm : ± 0.05

Rated speed rpm : 1050
rack travel mm : 12.75
Tolerance mm : ± 0.05

Rated speed rpm : 900
rack travel mm : 13.45
Tolerance mm : ± 0.20

Rated speed rpm : 975
rack travel mm : 13.05
Tolerance mm : ± 0.25

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1500
rack travel mm : 13.85
Tolerance mm : ± 0.05

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 500
rack travel mm : 10.50
Tolerance mm : ± 0.20

Rated speed rpm : 500

Pressure hPa : 230
rack travel mm : 10.95
Tolerance mm : ± 0.15

Pressure hPa : 310
rack travel mm : 11.35
Tolerance mm : ± 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : -
Rated speed rpm : 1050
Del. quantity
cm³/1000 strokes : 169.0

Tolerance
cm³/1000 strokes : ± 4.0
Check tolerance
cm³/1000S. : ± 6.0

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 114.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 4.0

BREAKAWAY

Rack travel in mm : 11.70
Rated speed rpm : 1095
Tolerance 1/min : ± 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 10.50
Tolerance mm : ± 0.20
Del. quantity
cm³/1000 strokes : 100.0
Tolerance
cm³/1000 strokes : ± 20.0
Check tolerance
cm³/1000S. : ± 24.0

LOW IDLE

Rated speed rpm : 350
rack travel mm : 5.10
Tolerance mm : ± 0.30
Del. quantity
cm³/1000 strokes : 18.0
Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 6.0
Speed
Tolerance
cm³/1000 strokes : 4.0
Check tolerance
cm³/1000S. : 8.0

End of test specification sheet



BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 11.07.95
Test oil : ISO 4113
Combination No. : 0 402 046 865
Injection pump
Pump designation : PES6P120A320LS3321
: -1
EP type number : 0 412 026 776
Governor
Governor design. : RQ275/950PA1085-1
Governor no. : 0 421 801 761
Cust. part No. : 645 625

Customer-spec. information
Customer : RABA
Motor : SIEHE BEMERKUNG

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0
Overflow valve : 1 417 413 025
Inlet press. bar : 1.5
Tolerance bar : ± 0.1
Test nozzle holde
assembly : 1 688 901 105
Opening pressure
bar : 208.5
Tolerance bar : ± 1.5
Test lines : 1 680 750 089
Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0
Prestroke mm : 4.45
Tolerance mm : ± 0.05
Check
tolerance mm : ± 0.10
Rack travel in mm : 12.50
Tolerance mm : ± 1.50
Firing order : 1- 5- 3- 6- 2-
: 4
Phasing : 0-60-120-180-240
: -300
Tolerance : ± 0.30
Check
tolerance °NW : ± 0.50
Start of delivery mark
Barrel no. : 1

BASIC SETTING

Rated speed rpm : 600
Rack travel in mm : 14.60
Tolerance mm : ± 0.05
Del. quantity
cm3/1000 strokes : 193.0
Tolerance
cm3/1000 strokes : ± 1.0

Check tolerance
 cm³/1000S. : + 4.0

Spreed
 Tolerance
 cm³/1000 strokes : 5.0

Check tolerance
 cm³/1000S. : 9.0

Rated speed rpm : 275

Rack travel in mm : 5.70
 Tolerance mm : + 0.30

Del. quantity
 cm³/1000 strokes : 24.0
 Tolerance
 cm³/1000 strokes : + 3.0

Check tolerance
 cm³/1000S. : + 6.0

Spreed
 Tolerance
 cm³/1000 strokes : 8.0

Check tolerance
 cm³/1000S. : 12.0

(B) SETTING OF INJECTION PUMP WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm : 275
 guide sleeve
 travel mm : 2.85
 Tolerance mm : + 0.10

Rated speed rpm : 1003
 guide sleeve
 travel mm : 6.55
 Tolerance mm : + 0.10

Rated speed rpm : 950
 guide sleeve
 travel mm : 6.00
 Tolerance mm : + 0.10

Rated speed rpm : 369
 guide sleeve
 travel mm : 5.24
 Tolerance mm : + 0.10

Rated speed rpm : 440
 guide sleeve
 travel mm : 6.00
 Tolerance mm : + 0.10

Rated speed rpm : 1170

guide sleeve
 travel mm : 11.50
 Tolerance mm : + 0.50

GUIDE SLEEVE POSITION

Rated speed rpm : 500
 Rack travel in mm : 20.00
 Tolerance mm : + 0.80

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 600
 Aneroid pressure
 hPa : 900
 Del. quantity
 cm³/1000 strokes : 193.0
 Tolerance
 cm³/1000 strokes : + 1.0
 Check tolerance
 cm³/1000S. : + 4.0
 Spreed
 Tolerance
 cm³/1000 strokes : 5.0
 Check tolerance
 cm³/1000S. : 9.0

CONTROL LEVER

control lever
 position degree : 37.0
 tolerance degree : + 4.0

control lever
 position degree : 99.0
 tolerance degree : + 4.0

RATED SPEED

rack travel mm : 13.60
 Rated speed rpm : 995
 Tolerance 1/min : + 5

rack travel mm : 4.00
 Rated speed rpm : 1090
 Tolerance 1/min : + 15

rack travel mm : 0.50
 Tolerance mm : + 0.50
 Rated speed rpm : 1200

LOW IDLE

control lever
position degree : 75.0
tolerance degree : ± 4.0

control lever
position degree : 13.0
tolerance degree : ± 4.0

Testing:

Rated speed rpm : 275
rack travel mm : 5.70
Tolerance mm : ± 0.10

rack travel mm : 2.00
Rated speed rpm : 355
Tolerance 1/min : ± 20

Rated speed rpm : 175

CRT mm min. : > 8.30

TORQUE CONTROL

Rated speed rpm : 600
rack travel mm : 14.60
Tolerance mm : ± 0.05

Rated speed rpm : 950
rack travel mm : 14.60
Tolerance mm : ± 0.10

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 900
rack travel mm : 14.60
Tolerance mm : ± 0.05

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 500
rack travel mm : 12.40
Tolerance mm : ± 0.20

Rated speed rpm : 500

Pressure hPa : 240
rack travel mm : 13.10
Tolerance mm : ± 0.15

Pressure hPa : 350

rack travel mm : 13.80
Tolerance mm : ± 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 900
Rated speed rpm : 950
Del. quantity
cm³/1000 strokes : 185.0
Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 6.0

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 114.0
Tolerance
cm³/1000 strokes : ± 2.0
Check tolerance
cm³/1000S. : ± 4.0

BREAKAWAY

Rack travel in mm : 13.60
Rated speed rpm : 995
Tolerance 1/min : ± 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm³/1000 strokes : 154.0
Tolerance
cm³/1000 strokes : ± 20.0
Check tolerance
cm³/1000S. : ± 24.0

LOW IDLE

Rated speed rpm : 275
rack travel mm : 5.70
Tolerance mm : ± 0.30
Del. quantity
cm³/1000 strokes : 24.0
Tolerance
cm³/1000 strokes : ± 3.0

Check tolerance
cm³/1000s. : ± 6.0
Speed
Tolerance
cm³/1000 strokes : 8.0
Check tolerance
cm³/1000s. : 12.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 29.01.96
Test oil : ISO 4113

Combination No. : 0 402 640 817

Injection pump
Pump designation : PE12P120A520LS7826
EP type number : 0 412 620 817

Governor
Governor design. : RQV350...1150PA870
: -4
Governor no. : 0 421 813 717

Cust. part No. : 0180745402

Customer-spec. information

Customer : MB-NFZ
Motor : OM 444 LA
Power KW : 736.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet
temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 1.5

Overflow quantity
min. l/h : 160
Tolerance l/h : +- 10.0

Test nozzle holde
assembly : 1 688 901 105

Opening pressure
bar : 208.5
Tolerance bar : +- 1.5

K01

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : +- 1.0

Prestroke mm : 4.45
Tolerance mm : +- 0.05
Check
tolerance mm : +- 0.10

Rack travel in mm : 20.00
Tolerance mm : +- 1.00

Firing order : 12- 1- 5- 9- 8
: - 3- 4- 11- 10
: - 2- 6- 7

Phasing : 0-45-60-105-120
: -165-180-225-240
: -285-300-345
Tolerance : +- 0.30
Check
tolerance °NW : +- 0.50

Start of delivery mark

Barrel no. : 12

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm : 15.30
Tolerance mm : +- 0.05

Del. quantity
cm³/1000 strokes : 306.0

<hr/>	
Tolerance	
cm3/1000 strokes	: + 1.0
<hr/>	
Check tolerance	
cm3/1000S.	: + 4.0
<hr/>	
Spreed	
Tolerance	
cm3/1000 strokes	: 6.0
<hr/>	
Check tolerance	
cm3/1000S.	: 10.0
<hr/>	
Rated speed rpm	: 350
<hr/>	
Rack travel in mm	: 5.60
Tolerance mm	: + 0.30
Del. quantity	
cm3/1000 strokes	: 15.0
Tolerance	
cm3/1000 strokes	: + 3.0
Check tolerance	
cm3/1000S.	: + 6.0
Spreed	
Tolerance	
cm3/1000 strokes	: 8.0
Check tolerance	
cm3/1000S.	: 12.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm	: 350
guide sleeve	
travel mm	: 1.55
Tolerance mm	: + 0.20
<hr/>	
Rated speed rpm	: 1206
guide sleeve	
travel mm	: 8.15
Tolerance mm	: + 0.15
<hr/>	
Rated speed rpm	: 600
guide sleeve	
travel mm	: 3.55
Tolerance mm	: + 0.25
<hr/>	
Rated speed rpm	: 960
guide sleeve	
travel mm	: 5.55
Tolerance mm	: + 0.25
<hr/>	
Rated speed rpm	: 1291
guide sleeve	
travel mm	: 10.05

K02

Tolerance mm : + 0.25

GUIDE SLEEVE POSITION

Rated speed rpm	: 1275
<hr/>	
Rack travel in mm	: 16.50
Tolerance mm	: + 1.30

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm	: 1150
Aneroid pressure	
hPa	: 1300
Del. quantity	
cm3/1000 strokes	: 306.0
Tolerance	
cm3/1000 strokes	: + 1.0
Check tolerance	
cm3/1000S.	: + 4.0
Spreed	
Tolerance	
cm3/1000 strokes	: 6.0
Check tolerance	
cm3/1000S.	: 10.0

CONTROL LEVER

control lever	
position degree	: 117.0
tolerance degree	: + 4.0

RATED SPEED

rack travel mm	: 14.30
Rated speed rpm	: 1195
Tolerance 1/min	: + 5
<hr/>	
rack travel mm	: 4.00
Rated speed rpm	: 1285
Tolerance 1/min	: + 15
<hr/>	
rack travel mm	: 0.50
Tolerance mm	: + 0.50
Rated speed rpm	: 1350

LOW IDLE

control lever	
position degree	: 66.0
tolerance degree	: + 4.0

Testing:

Rated speed rpm : 350
rack travel mm : 5.60
Tolerance mm : ± 0.10

Rated speed rpm : 250
CRT mm min. : > 7.30
Rated speed rpm : 475

TORQUE CONTROL

Rated speed rpm : 1150
rack travel mm : 15.30
Tolerance mm : ± 0.05

Rated speed rpm : 750
rack travel mm : 15.40
Tolerance mm : ± 0.10

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1300
rack travel mm : 15.40
Tolerance mm : ± 0.10

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 500
rack travel mm : 8.45
Tolerance mm : ± 0.15

Rated speed rpm : 500

Pressure hPa : 300
rack travel mm : 10.20
Tolerance mm : ± 0.05

Pressure hPa : 700
rack travel mm : 13.80
Tolerance mm : ± 0.15

START CUT-OUT

Rated speed rpm : > 200
Rated speed rpm : < 310

Check
speed 1/min : > 180

Check
speed 1/min : < 330

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 1300
Rated speed rpm : 750
Del. quantity
cm³/1000 strokes : 315.0
Tolerance
cm³/1000 strokes : ± 5.0
Check tolerance
cm³/1000S. : ± 8.0
Spreed
Tolerance
cm³/1000 strokes : 10.0
Check tolerance
cm³/1000S. : 15.0

Aneroid pressure
hPa : 1300
Rated speed rpm : 1150
Del. quantity
cm³/1000 strokes : 234.5
Tolerance
cm³/1000 strokes : ± 1.5
Check tolerance
cm³/1000S. : ± 4.5
Spreed
Tolerance
cm³/1000 strokes : 10.0
Check tolerance
cm³/1000S. : 15.0

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 124.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 4.0
Spreed
Tolerance
cm³/1000 strokes : 10.0
Check tolerance
cm³/1000S. : 15.0

BREAKAWAY

Rack travel in mm : 14.30
Rated speed rpm : 1195
Tolerance 1/min : ± 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm³/1000 strokes : 331.0
Tolerance
cm³/1000 strokes : ± 10.0
Check tolerance
cm³/1000S. : ± 14.0

LOW IDLE

Rated speed rpm : 350
rack travel mm : 5.60
Tolerance mm : ± 0.30
Del. quantity
cm³/1000 strokes : 15.0
Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 6.0
Spreed
Tolerance
cm³/1000 strokes : 8.0
Check tolerance
cm³/1000S. : 12.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 22.08.95
Test oil : ISO 4113
Combination No. : 0 402 946 017

Injection pump
Pump designation : PE6P120A720RS8039
EP type number : 0 412 926 026

Governor
Governor design. : RQV250...950PA1243
Governor no. : 0 421 814 162

Cust. part No. : 1374808

Customer-spec. information
Customer : SCANIA
Motor : DSC 11.79

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet temp. °C : 40
Tolerance °C : ± 2.0

Overflow valve : 2 417 413 082

Inlet press. bar : 2.5
Tolerance bar : ± 0.1

Test nozzle holder assembly : 1 688 901 104

Opening pressure bar : 251.5
Tolerance bar : ± 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

K05

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0

Prestroke mm : 4.15
Tolerance mm : ± 0.05
Check tolerance mm : ± 0.10

Rack travel in mm : 20.50
Tolerance mm : ± 0.50

Firing order : 1- 5- 3- 6- 2-
: 4

Phasing : 0-60-120-180-240
: -300
Tolerance : ± 0.30
Check tolerance °NW : ± 0.50

Start of delivery blocking

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 11.90
Tolerance mm : ± 0.05

Del. quantity cm³/1000 strokes : 298.0

Tolerance cm³/1000 strokes : ± 1.0

Check tolerance cm³/1000s. : ± 4.0

<hr/>	
Spreed	
Tolerance	
cm ³ /1000 strokes :	8.0
<hr/>	
Check tolerance	
cm ³ /1000S. :	12.0
Rated speed rpm :	250
Rack travel in mm :	5.40
Tolerance mm :	+ 0.30
Del. quantity	
cm ³ /1000 strokes :	21.0
Tolerance	
cm ³ /1000 strokes :	+ 3.0
Check tolerance	
cm ³ /1000S. :	+ 6.0
Spreed	
Tolerance	
cm ³ /1000 strokes :	4.0
Check tolerance	
cm ³ /1000S. :	8.0

(B) SETTING OF INJECTION PUMP WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm :	250
guide sleeve	
travel mm :	1.02
Tolerance mm :	+ 0.20
Rated speed rpm :	1008
guide sleeve	
travel mm :	8.27
Tolerance mm :	+ 0.15
Rated speed rpm :	733
guide sleeve	
travel mm :	6.04
Tolerance mm :	+ 0.25
Rated speed rpm :	470
guide sleeve	
travel mm :	3.78
Tolerance mm :	+ 0.25
Rated speed rpm :	1290
guide sleeve	
travel mm :	11.50
Tolerance mm :	+ 0.50

GUIDE SLEEVE POSITION

Rated speed rpm :	1125
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K06

Rack travel in mm :	10.90
Tolerance mm :	+ 1.30

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm :	700
Aneroid pressure	
hPa :	1500
Del. quantity	
cm ³ /1000 strokes :	298.0
Tolerance	
cm ³ /1000 strokes :	+ 1.0
Check tolerance	
cm ³ /1000S. :	+ 4.0
Spreed	
Tolerance	
cm ³ /1000 strokes :	8.0
Check tolerance	
cm ³ /1000S. :	12.0

CONTROL LEVER

control lever	
position degree :	51.0
tolerance degree :	+ 4.0
control lever	
position degree :	115.0
tolerance degree :	+ 4.0

RATED SPEED

rack travel mm :	10.90
Rated speed rpm :	995
Tolerance 1/min :	+ 5
rack travel mm :	4.00
Rated speed rpm :	1125
Tolerance 1/min :	+ 15
rack travel mm :	0.50
Tolerance mm :	+ 0.50
Rated speed rpm :	1200

LOW IDLE

control lever	
position degree :	81.0
tolerance degree :	+ 4.0
control lever	
position degree :	17.0
tolerance degree :	+ 4.0

Testing:

Rated speed rpm : 250
rack travel mm : 5.40
Tolerance mm : ± 0.10

Rated speed rpm : 150
CRT mm min. : > 8.10
Rated speed rpm : 300

TORQUE CONTROL

Rated speed rpm : 700
rack travel mm : 11.90
Tolerance mm : ± 0.05

Rated speed rpm : 950
rack travel mm : 11.90
Tolerance mm : ± 0.05

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1500
rack travel mm : 11.90
Tolerance mm : ± 0.05

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 500
rack travel mm : 9.20
Tolerance mm : ± 0.20

Rated speed rpm : 500

Pressure hPa : 350
rack travel mm : 10.30
Tolerance mm : ± 0.15

Pressure hPa : 600
rack travel mm : 11.40
Tolerance mm : ± 0.05

START CUT-OUT

Rated speed rpm : > 100
Rated speed rpm : < 170

Check speed 1/min : > 80
Check speed 1/min : < 190

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure hPa : 1500
Rated speed rpm : 950
Del. quantity cm3/1000 strokes : 282.0
Tolerance cm3/1000 strokes : ± 4.0
Check tolerance cm3/1000S. : ± 6.0

Aneroid pressure hPa : -
Rated speed rpm : 500
Del. quantity cm3/1000 strokes : 197.0
Tolerance cm3/1000 strokes : ± 1.0
Check tolerance cm3/1000S. : ± 4.0

BREAKAWAY

Rack travel in mm : 10.90
Rated speed rpm : 995
Tolerance 1/min : ± 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.50
Tolerance mm : ± 0.50

LOW IDLE

Rated speed rpm : 250
rack travel mm : 5.40
Tolerance mm : ± 0.30
Del. quantity cm3/1000 strokes : 21.0
Tolerance cm3/1000 strokes : ± 3.0
Check tolerance cm3/1000S. : ± 6.0
Speed

Tolerance
cm³/1000 strokes : 4.0
Check tolerance
cm³/1000S. : 8.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 29.01.96
Test oil : ISO 4113
Combination No. : 0 403 446 259
Injection pump
Pump designation : PES6MW100/72ORS1131
: -1
EP type number : 0 413 406 165
Governor
Governor design. : RQV300...1300MW68-2
Governor no. : 0 420 083 224

Cust. part No. :

Customer-spec. information

Customer : MB-NFZ
Motor : OM366LA
Power KW : 177.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet
temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde
assembly : 1 688 901 101

Opening pressure
bar : 208.5
Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

K09

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0
Tolerance bar : + 1.0

Prestroke mm : 3.65
Tolerance mm : + 0.05
Check
tolerance mm : + 0.10

Rack travel in mm : 10.50
Tolerance mm : + 1.50

Firing order : 1- 5- 3- 6- 2-
: 4

Phasing : 0-60-120-180-240
: -300
Tolerance : + 0.50
Check
tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 14.45
Tolerance mm : + 0.05

Del. quantity
cm3/1000 strokes : 112.0

Tolerance
cm3/1000 strokes : + 1.0

Check tolerance
cm3/1000S. : + 3.0

Speed
Tolerance
cm3/1000 strokes : 3.5

Check tolerance
 cm³/1000S. : 6.0
 Rated speed rpm : 300
 Rack travel in mm : 6.50
 Tolerance mm : +- 0.20
 Del. quantity
 cm³/1000 strokes : 12.0
 Tolerance
 cm³/1000 strokes : +- 2.0
 Check tolerance
 cm³/1000S. : +- 4.5
 Spreed
 Tolerance
 cm³/1000 strokes : 3.5
 Check tolerance
 cm³/1000S. : 5.5

(B) SETTING OF INJECTION PUMP
 WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm : 300
 guide sleeve
 travel mm : 0.92
 Tolerance mm : +- 0.25
 Rated speed rpm : 1355
 guide sleeve
 travel mm : 8.60
 Tolerance mm : +- 0.25
 Rated speed rpm : 2240
 guide sleeve
 travel mm : 24.82
 Tolerance mm : +- 0.25
 Rated speed rpm : 721
 guide sleeve
 travel mm : 5.69
 Tolerance mm : +- 0.25
 Rated speed rpm : 771
 guide sleeve
 travel mm : 6.18
 Tolerance mm : +- 0.25
 Rated speed rpm : 1040
 guide sleeve
 travel mm : 7.10
 Tolerance mm : +- 0.25
 Rated speed rpm : 1485
 guide sleeve
 travel mm : 10.00

K10

Tolerance mm : +- 0.25
 Rated speed rpm : 1620
 guide sleeve
 travel mm : 11.50
 Tolerance mm : +- 0.50

GUIDE SLEEVE POSITION

Rated speed rpm : 1450
 Rack travel in mm : 10.00
 Tolerance mm : +- 2.70

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1300
 Aneroid pressure
 hPa : 1000
 Del. quantity
 cm³/1000 strokes : 112.0
 Tolerance
 cm³/1000 strokes : +- 1.0
 Check tolerance
 cm³/1000S. : +- 3.0
 Spreed
 Tolerance
 cm³/1000 strokes : 3.5
 Check tolerance
 cm³/1000S. : 6.0

CONTROL LEVER

control lever
 position degree : 114.0
 tolerance degree : +- 4.0

RATED SPEED

rack travel mm : 13.40
 Rated speed rpm : 1345
 Tolerance 1/min : +- 5
 rack travel mm : 4.00
 Rated speed rpm : 1495
 Tolerance 1/min : +- 15
 rack travel mm : 0.50
 Tolerance mm : +- 0.50
 Rated speed rpm : 1600

LOW IDLE

control lever
position degree : 77.0
tolerance degree : ± 4.0

Testing:

Rated speed rpm : 300
rack travel mm : 6.50
Tolerance mm : ± 0.10

Rated speed rpm : 200

CRT mm min. : > 8.00

TORQUE CONTROL

Rated speed rpm : 1300
rack travel mm : 14.45
Tolerance mm : ± 0.05

Rated speed rpm : 750
rack travel mm : 14.45
Tolerance mm : ± 0.10

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1000
rack travel mm : 14.45
Tolerance mm : ± 0.10

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 500
rack travel mm : 11.00
Tolerance mm : ± 0.10

Rated speed rpm : 500

Pressure hPa : 400
rack travel mm : 13.45
Tolerance mm : ± 0.10

Pressure hPa : 200
rack travel mm : 11.60
Tolerance mm : ± 0.10

START CUT-OUT

Rated speed rpm : > 100
Rated speed rpm : < 220

K11

Check
speed 1/min : > 80
Check
speed 1/min : < 240

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 1000
Rated speed rpm : 750
Del. quantity
cm³/1000 strokes : 108.0
Tolerance
cm³/1000 strokes : ± 1.5
Check tolerance
cm³/1000S. : ± 4.0
Speed
Tolerance
cm³/1000 strokes : 5.0
Check tolerance
cm³/1000S. : 7.0

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 42.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 3.0

BREAKAWAY

Rack travel in mm : 13.40
Rated speed rpm : 1345
Tolerance 1/min : ± 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm³/1000 strokes : 105.0
Tolerance
cm³/1000 strokes : ± 5.0
Check tolerance
cm³/1000S. : ± 8.0

LOW IDLE

Rated speed rpm : 300

rack travel mm : 6.50
Tolerance mm : ± 0.20
Del. quantity
cm³/1000 strokes : 12.0
Tolerance
cm³/1000 strokes : ± 2.0
Check tolerance
cm³/1000S. : ± 4.5
Spreed
Tolerance
cm³/1000 strokes : 3.5
Check tolerance
cm³/1000S. : 5.5

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 30.01.96
Test oil : ISO 4113
Combination No. : 0 403 446 336
Injection pump
Pump designation : PES6MW100/720RS1131
: -1
EP type number : 0 413 406 165
Governor
Governor design. : RQV300...1300MW156
Governor no. : 0 420 083 342
Cust. part No. : 0270740602

Customer-spec. information
Customer : MB-NFZ
Motor : OM366LA
Power KW : 170.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet
temp. °C : 40
Tolerance °C : + 2.0
Overflow valve : 1 419 992 198
Inlet press. bar : 1.5
Test nozzle holder
assembly : 1 688 901 101
Opening pressure
bar : 208.5
Tolerance bar : + 1.5
Test lines : 1 680 750 089
Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0
Tolerance bar : + 1.0
Prestroke mm : 3.65
Tolerance mm : + 0.05
Check
tolerance mm : + 0.10
Rack travel in mm : 10.50
Tolerance mm : + 1.50
Firing order : 1- 5- 3- 6- 2-
: 4
Phasing : 0-60-120-180-240
: -300
Tolerance : + 0.50
Check
tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1300
Rack travel in mm : 14.45
Tolerance mm : + 0.05
Del. quantity
cm³/1000 strokes : 112.0
Tolerance
cm³/1000 strokes : + 1.0
Check tolerance
cm³/1000S. : + 3.0
Spreed

Tolerance
cm³/1000 strokes : 3.5

Check tolerance
cm³/1000S. : 6.0

Rated speed rpm : 300

Rack travel in mm : 7.20
Tolerance mm : ± 0.20

Del. quantity
cm³/1000 strokes : 12.0

Tolerance
cm³/1000 strokes : ± 2.0

Check tolerance
cm³/1000S. : ± 4.5

Spread
Tolerance
cm³/1000 strokes : 3.5

Check tolerance
cm³/1000S. : 5.5

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm : 300
guide sleeve
travel mm : 1.69
Tolerance mm : ± 0.20

Rated speed rpm : 1355
guide sleeve
travel mm : 8.41
Tolerance mm : ± 0.15

Rated speed rpm : 1070
guide sleeve
travel mm : 6.53
Tolerance mm : ± 0.25

Rated speed rpm : 650
guide sleeve
travel mm : 4.94
Tolerance mm : ± 0.25

Rated speed rpm : 1502
guide sleeve
travel mm : 10.00
Tolerance mm : ± 0.25

Rated speed rpm : 1630
guide sleeve
travel mm : 11.50
Tolerance mm : ± 0.50

GUIDE SLEEVE POSITION

Rated speed rpm : 1450

Rack travel in mm : 11.00
Tolerance mm : ± 2.70

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1300

Aneroid pressure
hPa : 1000

Del. quantity
cm³/1000 strokes : 112.0

Tolerance
cm³/1000 strokes : ± 1.0

Check tolerance
cm³/1000S. : ± 3.0

Spread
Tolerance
cm³/1000 strokes : 3.5

Check tolerance
cm³/1000S. : 6.0

CONTROL LEVER

control lever
position degree : 123.0
tolerance degree : ± 4.0

RATED SPEED

rack travel mm : 13.40
Rated speed rpm : 1345
Tolerance 1/min : ± 5

rack travel mm : 4.00
Rated speed rpm : 1500
Tolerance 1/min : ± 15

rack travel mm : 0.50
Tolerance mm : ± 0.50
Rated speed rpm : 1600

LOW IDLE

control lever
position degree : 73.0
tolerance degree : ± 4.0

Testing:

Rated speed rpm : 300
rack travel mm : 7.20
Tolerance mm : ± 0.10

Rated speed rpm : 200
CRT mm min. : > 8.50

TORQUE CONTROL

Rated speed rpm : 1300
rack travel mm : 14.45
Tolerance mm : ± 0.05

Rated speed rpm : 750
rack travel mm : 14.45
Tolerance mm : ± 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1000
rack travel mm : 14.45
Tolerance mm : ± 0.05

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 500
rack travel mm : 11.00
Tolerance mm : ± 0.05

Rated speed rpm : 500

Pressure hPa : 400
rack travel mm : 13.40
Tolerance mm : ± 0.10

Pressure hPa : 200
rack travel mm : 11.60
Tolerance mm : ± 0.10

START CUT-OUT

Rated speed rpm : > 100
Rated speed rpm : < 180

Check
speed 1/min : > 80
Check
speed 1/min : < 200

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 1000
Rated speed rpm : 750
Del. quantity
cm³/1000 strokes : 107.0
Tolerance
cm³/1000 strokes : ± 1.5
Check tolerance
cm³/1000S. : ± 4.0
Spreed
Tolerance
cm³/1000 strokes : 5.0
Check tolerance
cm³/1000S. : 7.0

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 41.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 3.0

BREAKAWAY

Rack travel in mm : 13.40
Rated speed rpm : 1345
Tolerance 1/min : ± 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm³/1000 strokes : 105.0
Tolerance
cm³/1000 strokes : ± 5.0
Check tolerance
cm³/1000S. : ± 8.0

LOW IDLE

Rated speed rpm : 300
rack travel mm : 7.20
Tolerance mm : ± 0.20
Del. quantity
cm³/1000 strokes : 12.0

Tolerance
cm³/1000 strokes : +- 2.0
Check tolerance
cm³/1000s. : +- 4.5
Spreed
Tolerance
cm³/1000 strokes : 3.5
Check tolerance
cm³/1000s. : 5.5

End of test specification sheet



BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 29.01.96
Test oil : ISO 4113
Combination No. : 9 400 030 737
Injection pump
Pump designation : PES6A95D320/3RS2881
EP type number : 9 410 037 215
Governor
Governor design. : RSV475...1100A0C850R
Governor no. : 9 420 034 716

Cust. part No. : 3929409

Customer-spec. information

Customer : CDC
Motor : 6BT
Power KW : 90.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2
Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0
Overflow valve : 1 417 413 047
Inlet press. bar : 2.0
Test nozzle holde
assembly : 1 688 901 101
Opening pressure
bar : 208.5
Tolerance bar : ± 1.5
Test lines : 1 680 750 014
Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0
Tolerance bar : ± 1.0
Prestroke mm : 2.85
Tolerance mm : ± 0.05
Check
tolerance mm : ± 0.10
Rack travel in mm : 10.50
Tolerance mm : ± 1.50
Firing order : 1- 5- 3- 6- 2-
: 4
Phasing : 0-60-120-180-240
: -300
Tolerance : ± 0.50
Check
tolerance °NW : ± 0.75
Start of delivery blocking
°NW after s.o.d. : 7.50
Tolerance : ± 0.50
Check
tolerance °NW : ± 0.75
Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100
Rack travel in mm : 10.25
Tolerance mm : ± 0.05

Del. quantity
cm³/1000 strokes : 81.5

Tolerance
cm³/1000 strokes : ± 1.0

Check tolerance
cm³/1000S. : ± 3.0

Spreed
Tolerance
cm³/1000 strokes : 4.0

Check tolerance
cm³/1000S. : 6.5

Del. quantity
cm³/1000 strokes : 18.5

Tolerance
cm³/1000 strokes : ± 2.0

Check tolerance
cm³/1000S. : ± 4.5

Spreed
Tolerance
cm³/1000 strokes : 6.0

Check tolerance
cm³/1000S. : 8.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800

Rack travel in mm : 0.50

Tolerance mm : ± 0.20

governor spring
pre-tension
click setting x : 5.00

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1100

Aneroid pressure
hPa : 900

Del. quantity
cm³/1000 strokes : 81.5

Tolerance
cm³/1000 strokes : ± 1.0

Check tolerance
cm³/1000S. : ± 3.0

Spreed
Tolerance
cm³/1000 strokes : 4.0

Check tolerance
cm³/1000S. : 6.5

CONTROL LEVER

control lever
position degree : 97.0

tolerance degree : ± 4.0

RATED SPEED

rack travel mm : 9.20

Rated speed rpm : 1165

Tolerance 1/min : ± 5

rack travel mm : 4.50

Rated speed rpm : 1215

Tolerance 1/min : ± 5

rack travel mm : 0.85

Tolerance mm : ± 0.55

Rated speed rpm : 1300

LOW IDLE

control lever
position degree : 85.5

tolerance degree : ± 4.0

Setting point w/out bumper spring

Rated speed rpm : 475

rack travel mm : 4.60

Testing:

Rated speed rpm : 475

rack travel mm : 5.10

Tolerance mm : ± 0.10

Rated speed rpm : 100

CRT mm min. : > 19.00

TORQUE CONTROL

Rated speed rpm : 1100

rack travel mm : 10.25

Tolerance mm : ± 0.05

Rated speed rpm : 800

rack travel mm : 10.90

Tolerance mm : ± 0.10

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 800
Pressure hPa : 900

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 800
rack travel mm : 8.70
Tolerance mm : ± 0.20

Rated speed rpm : 800

Pressure hPa : 450
rack travel mm : 10.50
Tolerance mm : ± 0.20

Pressure hPa : 275
rack travel mm : 9.50
Tolerance mm : ± 0.20

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 900
Rated speed rpm : 800
Del. quantity
cm³/1000 strokes : 93.0
Tolerance
cm³/1000 strokes : ± 2.0
Check tolerance
cm³/1000S. : ± 4.0

Aneroid pressure
hPa : -
Rated speed rpm : 800
Del. quantity
cm³/1000 strokes : 65.5
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 3.0

BREAKAWAY

Rack travel in mm : 9.20
Rated speed rpm : 1165
Tolerance 1/min : ± 5

K19

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.50
Tolerance mm : ± 0.50
Del. quantity
cm³/1000 strokes : 120.5
Tolerance
cm³/1000 strokes : ± 10.0
Check tolerance
cm³/1000S. : ± 15.0

LOW IDLE

Del. quantity
cm³/1000 strokes : 18.5
Tolerance
cm³/1000 strokes : ± 2.0
Check tolerance
cm³/1000S. : ± 4.5
Speed
Tolerance
cm³/1000 strokes : 6.0
Check tolerance
cm³/1000S. : 8.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 29.01.96
Test oil : ISO 4113
Combination No. : 9 400 030 738
Injection pump
Pump designation : PES6A95D320/3RS2881
EP type number : 9 410 037 215
Governor
Governor design. : RSV475...1100A0C851R
Governor no. : 9 420 034 717

Cust. part No. : 3929408

Customer-spec. information

Customer : CDC
Motor : 6BT
Power KW : 98.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2
Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0
Overflow valve : 1 417 413 047
Inlet press. bar : 2.0
Test nozzle holde
assembly : 1 688 901 101
Opening pressure
bar : 208.5
Tolerance bar : ± 1.5
Test lines : 1 680 750 014
Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0
Tolerance bar : ± 1.0

Prestroke mm : 2.85
Tolerance mm : ± 0.05
Check
tolerance mm : ± 0.10

Rack travel in mm : 10.50
Tolerance mm : ± 1.50

Firing order : 1- 5- 3- 6- 2-
: 4

Phasing : 0-60-120-180-240
: -300
Tolerance : ± 0.50
Check
tolerance °NW : ± 0.75

Start of delivery blocking

°NW after s.o.d. : 7.50
Tolerance : ± 0.50
Check
tolerance °NW : ± 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 11.05
Tolerance mm : ± 0.05

Del. quantity cm ³ /1000 strokes	:	92.5
<hr/>		
Tolerance cm ³ /1000 strokes	:	+ 1.0
<hr/>		
Check tolerance cm ³ /1000S.	:	+ 3.0
<hr/>		
Spreed Tolerance cm ³ /1000 strokes	:	4.0
<hr/>		
Check tolerance cm ³ /1000S.	:	6.5
<hr/>		
Del. quantity cm ³ /1000 strokes	:	18.5
Tolerance cm ³ /1000 strokes	:	+ 2.0
Check tolerance cm ³ /1000S.	:	+ 4.5
Spreed Tolerance cm ³ /1000 strokes	:	6.0
Check tolerance cm ³ /1000S.	:	8.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm	:	800
Rack travel in mm	:	0.50
Tolerance mm	:	+ 0.20
governor spring pre-tension click setting x	:	5.00

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm	:	1100
Aneroid pressure hPa	:	900
Del. quantity cm ³ /1000 strokes	:	92.5
Tolerance cm ³ /1000 strokes	:	+ 1.0
Check tolerance cm ³ /1000S.	:	+ 3.0
Spreed Tolerance cm ³ /1000 strokes	:	4.0

Check tolerance cm ³ /1000S.	:	6.5
--	---	-----

CONTROL LEVER

control lever position degree	:	96.0
tolerance degree	:	+ 4.0

RATED SPEED

rack travel mm	:	10.00
Rated speed rpm	:	1165
Tolerance 1/min	:	+ 5
rack travel mm	:	4.50
Rated speed rpm	:	1215
Tolerance 1/min	:	+ 5
rack travel mm	:	0.85
Tolerance mm	:	+ 0.55
Rated speed rpm	:	1300

LOW IDLE

control lever position degree	:	85.5
tolerance degree	:	+ 4.0

Setting point w/out bumper spring

Rated speed rpm	:	475
rack travel mm	:	4.60

Testing:

Rated speed rpm	:	475
rack travel mm	:	5.10
Tolerance mm	:	+ 0.10
Rated speed rpm	:	100
CRT mm min.	:	> 19.00

TORQUE CONTROL

Rated speed rpm	:	1100
rack travel mm	:	11.05
Tolerance mm	:	+ 0.05
Rated speed rpm	:	800
rack travel mm	:	11.80
Tolerance mm	:	+ 0.10

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 800
Pressure hPa : 900

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 800
rack travel mm : 8.70
Tolerance mm : +- 0.20

Rated speed rpm : 800

Pressure hPa : 650
rack travel mm : 11.20
Tolerance mm : +- 0.20

Pressure hPa : 350
rack travel mm : 9.50
Tolerance mm : +- 0.20

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 900
Rated speed rpm : 800
Del. quantity
cm³/1000 strokes : 104.0
Tolerance
cm³/1000 strokes : +- 2.0
Check tolerance
cm³/1000S. : +- 4.0

Aneroid pressure
hPa : -
Rated speed rpm : 800
Del. quantity
cm³/1000 strokes : 65.5
Tolerance
cm³/1000 strokes : +- 1.0
Check tolerance
cm³/1000S. : +- 3.0

BREAKAWAY

Rack travel in mm : 10.00
Rated speed rpm : 1165
Tolerance 1/min : +- 5

K22

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.50
Tolerance mm : +- 0.50
Del. quantity
cm³/1000 strokes : 120.5
Tolerance
cm³/1000 strokes : +- 10.0
Check tolerance
cm³/1000S. : +- 15.0

LOW IDLE

Del. quantity
cm³/1000 strokes : 18.5
Tolerance
cm³/1000 strokes : +- 2.0
Check tolerance
cm³/1000S. : +- 4.5
Spreed
Tolerance
cm³/1000 strokes : 6.0
Check tolerance
cm³/1000S. : 8.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 29.01.96
Test oil : ISO 4113

Combination No. : 9 400 030 739

Injection pump
Pump designation : PES6A95D320/3RS2881
EP type number : 9 410 037 215

Governor
Governor design. : RSV475...1250A0C852R
Governor no. : 9 420 034 718

Cust. part No. : 3929403

Customer-spec. information
Customer : CDC
Motor : 6BT
Power KW : 114.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0

Test nozzle holde
assembly : 1 688 901 101

Opening pressure
bar : 208.5
Tolerance bar : ± 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0
Tolerance bar : ± 1.0

Prestroke mm : 2.85
Tolerance mm : ± 0.05
Check
tolerance mm : ± 0.10

Rack travel in mm : 10.50
Tolerance mm : ± 1.50

Firing order : 1- 5- 3- 6- 2-
: 4

Phasing : 0-60-120-180-240
: -300
Tolerance : ± 0.50
Check
tolerance °NW : ± 0.75

Start of delivery blocking

°NW after s.o.d. : 7.50
Tolerance : ± 0.50
Check
tolerance °NW : ± 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 11.75
Tolerance mm : ± 0.05

Del. quantity
cm³/1000 strokes : 101.5

Tolerance
cm³/1000 strokes : ± 1.0

Check tolerance
cm³/1000S. : ± 3.0

Spread
Tolerance
cm³/1000 strokes : 4.0

Check tolerance
cm³/1000S. : 6.5

Del. quantity
cm³/1000 strokes : 21.5

Tolerance
cm³/1000 strokes : ± 2.0

Check tolerance
cm³/1000S. : ± 4.5

Spread
Tolerance
cm³/1000 strokes : 6.0

Check tolerance
cm³/1000S. : 8.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800

Rack travel in mm : 0.50
Tolerance mm : ± 0.20

governor spring
pre-tension
click setting x : 5.00

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1250
Aneroid pressure
hPa : 900
Del. quantity
cm³/1000 strokes : 101.5
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 3.0
Spread
Tolerance
cm³/1000 strokes : 4.0

Check tolerance
cm³/1000S. : 6.5

CONTROL LEVER

control lever
position degree : 102.0
tolerance degree : ± 4.0

RATED SPEED

rack travel mm : 10.70
Rated speed rpm : 1305
Tolerance 1/min : ± 5

rack travel mm : 4.50
Rated speed rpm : 1375
Tolerance 1/min : ± 5

rack travel mm : 0.85
Tolerance mm : ± 0.55
Rated speed rpm : 1450

LOW IDLE

control lever
position degree : 89.0
tolerance degree : ± 4.0

Setting point w/out bumper spring

Rated speed rpm : 475
rack travel mm : 4.60

Testing:

Rated speed rpm : 475
rack travel mm : 5.10
Tolerance mm : ± 0.10

Rated speed rpm : 100

CRT mm min. : > 19.00

TORQUE CONTROL

Rated speed rpm : 1250
rack travel mm : 11.75
Tolerance mm : ± 0.05

Rated speed rpm : 800
rack travel mm : 12.10
Tolerance mm : ± 0.10

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 800
Pressure hPa : 900

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 800
rack travel mm : 8.70
Tolerance mm : ± 0.20

Rated speed rpm : 800

Pressure hPa : 600
rack travel mm : 11.50
Tolerance mm : ± 0.20

Pressure hPa : 275
rack travel mm : 9.50
Tolerance mm : ± 0.20

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 900
Rated speed rpm : 800
Del. quantity
cm³/1000 strokes : 107.5
Tolerance
cm³/1000 strokes : ± 2.0
Check tolerance
cm³/1000S. : ± 4.0

Aneroid pressure
hPa : -
Rated speed rpm : 800
Del. quantity
cm³/1000 strokes : 65.5
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 3.0

BREAKAWAY

Rack travel in mm : 10.70
Rated speed rpm : 1305
Tolerance 1/min : ± 5

K25

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.50
Tolerance mm : ± 0.50
Del. quantity
cm³/1000 strokes : 120.5
Tolerance
cm³/1000 strokes : ± 10.0
Check tolerance
cm³/1000S. : ± 15.0

LOW IDLE

Del. quantity
cm³/1000 strokes : 21.5
Tolerance
cm³/1000 strokes : ± 2.0
Check tolerance
cm³/1000S. : ± 4.5
Spreed
Tolerance
cm³/1000 strokes : 6.0
Check tolerance
cm³/1000S. : 8.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 30.01.96
Test oil : ISO 4113
Combination No. : 0 400 836 019
Injection pump
Pump designation : PES6A80D410/3RS2527
EP type number : 0 410 886 059
Governor
Governor design. : RQ300/1250AB935-2L
Governor no. : 0 420 200 107

Cust. part No. :

Customer-spec. information
Customer : KHD
Motor : F6L912
Power KW : 89.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet temp. °C : 40
Tolerance °C : +- 2.0
Overflow valve : 1 419 992 198
Inlet press. bar : 1.5
Test nozzle holde assembly : 0 681 343 009
Opening pressure bar : 173.5
Tolerance bar : +- 1.5
Test lines : 1 680 750 014
Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : +- 1.0
Prestroke mm : 1.95
Tolerance mm : +- 0.05
Check tolerance mm : +- 0.10
Rack travel in mm : 10.50
Tolerance mm : +- 1.50
Firing order : 1- 5- 3- 6- 2-
: 4
Phasing : 0-60-120-180-240
: -300

BASIC SETTING

Rated speed rpm : 1250
Rack travel in mm : 12.55
Tolerance mm : +- 0.05
Del. quantity cm3/1000 strokes : 67.0
Tolerance cm3/1000 strokes : +- 0.5
Check tolerance cm3/1000S. : +- 2.0
Speed
Tolerance cm3/1000 strokes : 2.5

Check tolerance
 cm³/1000S. : 4.0
 Rated speed rpm : 300
 Rack travel in mm : 8.50
 Tolerance mm : ± 0.10
 Del. quantity
 cm³/1000 strokes : 10.0
 Tolerance
 cm³/1000 strokes : ± 1.5
 Check tolerance
 cm³/1000S. : ± 3.5
 Spread
 Tolerance
 cm³/1000 strokes : 4.0
 Check tolerance
 cm³/1000S. : 6.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800
 Rack travel in mm : 20.00
 Tolerance mm : ± 0.80

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1250
 Aneroid pressure
 hPa : -
 Del. quantity
 cm³/1000 strokes : 67.0
 Tolerance
 cm³/1000 strokes : ± 0.5
 Check tolerance
 cm³/1000S. : ± 2.0
 Spread
 Tolerance
 cm³/1000 strokes : 2.5
 Check tolerance
 cm³/1000S. : 4.0

RATED SPEED

rack travel mm : 11.50
 Rated speed rpm : 1303
 Tolerance 1/min : ± 8
 rack travel mm : 4.00
 Rated speed rpm : 1390
 Tolerance 1/min : ± 15

LOW IDLE

Testing:

Rated speed rpm : 300
 rack travel mm : 8.50
 Tolerance mm : ± 0.10
 rack travel mm : 2.00
 Rated speed rpm : 625
 Tolerance 1/min : ± 20
 Rated speed rpm : 100
 CRT mm min. : > 9.50

TORQUE CONTROL

Dimension a mm : 1.30
 Rated speed rpm : 1250
 rack travel mm : 12.55
 Tolerance mm : ± 0.05
 Rated speed rpm : 800
 rack travel mm : 13.80
 Tolerance mm : ± 0.05
 Rated speed rpm : 910
 rack travel mm : 13.50
 Tolerance mm : ± 0.10
 Rated speed rpm : 1045
 rack travel mm : 12.85
 Tolerance mm : ± 0.15

START CUT-OUT

Rated speed rpm : > 100
 Rated speed rpm : < 220
 Check
 speed 1/min : > 80
 Check
 speed 1/min : < 240

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
 hPa : -
 Rated speed rpm : 800
 Del. quantity
 cm³/1000 strokes : 71.5

Tolerance
cm³/1000 strokes : + 1.5
Check tolerance
cm³/1000S. : + 3.0

BREAKAWAY

Rack travel in mm : 11.50
Rated speed rpm : 1303
Tolerance 1/min : + 8

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.50
Tolerance mm : + 1.00
Del. quantity
cm³/1000 strokes : 125.0
Tolerance
cm³/1000 strokes : + 7.5
Check tolerance
cm³/1000S. : + 10.0

LOW IDLE

Rated speed rpm : 300
rack travel mm : 8.50
Tolerance mm : + 0.10
Del. quantity
cm³/1000 strokes : 10.0
Tolerance
cm³/1000 strokes : + 1.5
Check tolerance
cm³/1000S. : + 3.5
Spreed
Tolerance
cm³/1000 strokes : 4.0
Check tolerance
cm³/1000S. : 6.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 29.01.96
Test oil : ISO 4113
Combination No. : 0 400 863 020
Injection pump
Pump designation : PES3A95D410/3RS2905
EP type number : 0 410 893 996
Governor
Governor design. : RSV325...1250A5C858L
Governor no. : 0 420 232 621

Cust. part No. : 0423 1592 KY

Customer-spec. information
Customer : KHD-DMI
Motor : F3L912/913_NEU
Power KW : 40.5

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet temp. °C : 40
Tolerance °C : +- 2.0
Overflow valve : 1 419 992 198
Inlet press. bar : 1.5
Test nozzle holder assembly : 0 681 343 009
Opening pressure bar : 173.5
Tolerance bar : +- 1.5
Test lines : 1 680 750 014
Outside diameter : 6.0

L01

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : +- 1.0
Prestroke mm : 3.00
Tolerance mm : +- 0.05
Check tolerance mm : +- 0.10
Rack travel in mm : 10.50
Tolerance mm : +- 1.50
Firing order : 1- 3- 2
Phasing : 0-120-240

BASIC SETTING

Rated speed rpm : 1250
Rack travel in mm : 11.35
Tolerance mm : +- 0.05
Del. quantity cm3/1000 strokes : 76.0
Tolerance cm3/1000 strokes : +- 1.0
Check tolerance cm3/1000s. : +- 3.0
Spreec. Tolerance cm3/1000 strokes : 3.5
Check tolerance cm3/1000s. : 8.0
Rated speed rpm : 325

Rack travel in mm : 9.40
 Tolerance mm : ± 0.10
 Del. quantity
 cm³/1000 strokes : 21.0
 Tolerance
 cm³/1000 strokes : ± 2.0
 Check tolerance
 cm³/1000S. : ± 4.5
 Spreed
 Tolerance
 cm³/1000 strokes : 5.5
 Check tolerance
 cm³/1000S. : 9.0

(B) SETTING OF INJECTION PUMP
 WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800
 Rack travel in mm : 0.50
 Tolerance mm : ± 0.20
 governor spring
 pre-tension
 click setting x : 2.25

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1250
 Aneroid pressure
 hPa : -
 Del. quantity
 cm³/1000 strokes : 76.0
 Tolerance
 cm³/1000 strokes : ± 1.0
 Check tolerance
 cm³/1000S. : ± 3.0
 Spreed
 Tolerance
 cm³/1000 strokes : 3.5
 Check tolerance
 cm³/1000S. : 8.0

CONTROL LEVER

control lever
 position degree : 99.0
 tolerance degree : ± 4.0

RATED SPEED

L02

rack travel mm : 10.35
 Rated speed rpm : 1295
 Tolerance 1/min : ± 5

rack travel mm : 4.00
 Rated speed rpm : 1355
 Tolerance 1/min : ± 15

rack travel mm : 0.85
 Tolerance mm : ± 0.55
 Rated speed rpm : 1450

rack travel mm : 4.00
 Rated speed rpm : 1365

LOW IDLE

control lever
 position degree : 65.0
 tolerance degree : ± 4.0

Setting point w/out bumper spring

Rated speed rpm : 325
 rack travel mm : 8.90

Testing:

Rated speed rpm : 325
 rack travel mm : 9.40
 Tolerance mm : ± 0.10

rack travel mm : 2.00
 Rated speed rpm : 500
 Tolerance 1/min : ± 30

TORQUE CONTROL

Rated speed rpm : 1250
 rack travel mm : 11.35
 Tolerance mm : ± 0.05

Rated speed rpm : 750
 rack travel mm : 11.35
 Tolerance mm : ± 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
 hPa : -
 Rated speed rpm : 750

Del. quantity
cm³/1000 strokes : 70.0
Tolerance
cm³/1000 strokes : ± 2.0
Check tolerance
cm³/1000S. : ± 4.0

BREAKAWAY

Rack travel in mm : 10.35
Rated speed rpm : 1295
Tolerance 1/min : ± 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.25
Tolerance mm : ± 0.75
Del. quantity
cm³/1000 strokes : 120.0
Tolerance
cm³/1000 strokes : ± 7.5
Check tolerance
cm³/1000S. : ± 10.0

LOW IDLE

Rated speed rpm : 325
rack travel mm : 9.40
Tolerance mm : ± 0.10
Del. quantity
cm³/1000 strokes : 21.0
Tolerance
cm³/1000 strokes : ± 2.0
Check tolerance
cm³/1000S. : ± 4.5
Spreed
Tolerance
cm³/1000 strokes : 5.5
Check tolerance
cm³/1000S. : 9.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 30.01.96
Test oil : ISO 4113
Combination No. : 0 400 863 022
Injection pump
Pump designation : PES3A95D410/3RS2905
EP type number : 0 410 893 996
Governor
Governor design. : RSV325...1250A5C860L
Governor no. : 0 420 232 623
Cust. part No. : 0423 1730 KY

Customer-spec. information
Customer : KHD-DMI
Motor : F3L912/913_NEU
Power KW : 44.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet temp. °C : 40
Tolerance °C : + 2.0
Overflow valve : 1 419 992 198
Inlet press. bar : 1.5
Test nozzle holder assembly : 0 681 343 009
Opening pressure bar : 173.5
Tolerance bar : + 1.5
Test lines : 1 680 750 014
Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant. per values

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : + 1.0

Prestroke mm : 3.00
Tolerance mm : + 0.05
Check tolerance mm : + 0.10

Rack travel in mm : 10.50
Tolerance mm : + 1.50

Firing order : 1- 3- 2

Phasing : 0-120-240

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 11.35
Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 76.0

Tolerance cm3/1000 strokes : + 1.0

Check tolerance cm3/1000S. : + 3.0

Spread Tolerance cm3/1000 strokes : 3.5

Check tolerance cm3/1000S. : 8.0

Rated speed rpm : 325

Rack travel in mm : 9.40
 Tolerance mm : ± 0.10
 Del. quantity
 cm³/1000 strokes : 21.0
 Tolerance
 cm³/1000 strokes : ± 2.0
 Check tolerance
 cm³/1000S. : ± 4.5
 Spreed
 Tolerance
 cm³/1000 strokes : 5.5
 Check tolerance
 cm³/1000S. : 9.0

(B) SETTING OF INJECTION PUMP
 WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800
 Rack travel in mm : 0.50
 Tolerance mm : ± 0.20

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1250
 Aneroid pressure
 hPa : -
 Del. quantity
 cm³/1000 strokes : 76.0
 Tolerance
 cm³/1000 strokes : ± 1.0
 Check tolerance
 cm³/1000S. : ± 3.0
 Spreed
 Tolerance
 cm³/1000 strokes : 3.5
 Check tolerance
 cm³/1000S. : 8.0

CONTROL LEVER

control lever
 position degree : 99.0
 tolerance degree : ± 4.0

RATED SPEED

rack travel mm : 10.35
 Rated speed rpm : 1295
 Tolerance 1/min : ± 5

rack travel mm : 4.00
 Rated speed rpm : 1355
 Tolerance 1/min : ± 15

rack travel mm : 0.85
 Tolerance mm : ± 0.55
 Rated speed rpm : 1450

rack travel mm : 4.00
 Rated speed rpm : 1365

LOW IDLE

control lever
 position degree : 65.0
 tolerance degree : ± 4.0

Setting point w/out bumper spring

Rated speed rpm : 325
 rack travel mm : 8.90

Testing:

Rated speed rpm : 325
 rack travel mm : 9.40
 Tolerance mm : ± 0.10

TORQUE CONTROL

Rated speed rpm : 1250
 rack travel mm : 11.35
 Tolerance mm : ± 0.05

Rated speed rpm : 750
 rack travel mm : 11.35
 Tolerance mm : ± 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
 hPa : -
 Rated speed rpm : 750
 Del. quantity
 cm³/1000 strokes : 70.0
 Tolerance
 cm³/1000 strokes : ± 2.0
 Check tolerance
 cm³/1000S. : ± 4.0

BREAKAWAY

Rack travel in mm : 10.35
Rated speed rpm : 1295
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.25
Tolerance mm : + 0.75
Del. quantity
cm³/1000 strokes : 120.0
Tolerance
cm³/1000 strokes : + 7.5
Check tolerance
cm³/1000S. : + 10.0

LOW IDLE

Rated speed rpm : 325
rack travel mm : 9.40
Tolerance mm : + 0.10
Del. quantity
cm³/1000 strokes : 21.0
Tolerance
cm³/1000 strokes : + 2.0
Check tolerance
cm³/1000S. : + 4.5
Spreed
Tolerance
cm³/1000 strokes : 5.5
Check tolerance
cm³/1000S. : 9.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 30.01.96
Test oil : ISO 4113
Combination No. : 0 400 863 023
Injection pump
Pump designation : PES3A95D410/3RS2905
EP type number : 0 410 893 996
Governor
Governor design. : RSV325...1250A5C861L
Governor no. : 0 420 232 624
Cust. part No. : 0423 1731 KY

Customer-spec. information
Customer : KHD-DMI
Motor : F3L912/913_NEU
Power KW : 44.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet temp. °C : 40
Tolerance °C : ± 2.0
Overflow valve : 1 419 992 198
Inlet press. bar : 1.5
Test nozzle holder assembly : 0 681 343 009
Opening pressure bar : 173.5
Tolerance bar : ± 1.5
Test Lines : 1 680 750 014
Outside diameter : 6.0

L07

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0

Prestroke mm : 3.00
Tolerance mm : ± 0.05
Check tolerance mm : ± 0.10

Rack travel in mm : 10.50
Tolerance mm : ± 1.50

Firing order : 1- 3- 2

Phasing : 0-120-240

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 11.35
Tolerance mm : ± 0.05

Del. quantity cm3/1000 strokes : 76.0

Tolerance cm3/1000 strokes : ± 1.0

Check tolerance cm3/1000S. : ± 3.0

Spread Tolerance cm3/1000 strokes : 3.5

Check tolerance cm3/1000S. : 8.0

Rated speed rpm : 325

Rack travel in mm : 9.40
Tolerance mm : + 0.10
Del. quantity
cm³/1000 strokes : 21.0
Tolerance
cm³/1000 strokes : + 2.0
Check tolerance
cm³/1000S. : + 4.5
Spreed
Tolerance
cm³/1000 strokes : 5.5
Check tolerance
cm³/1000S. : 9.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800
Rack travel in mm : 0.50
Tolerance mm : + 0.20

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1250
Aneroid pressure
hPa : -
Del. quantity
cm³/1000 strokes : 76.0
Tolerance
cm³/1000 strokes : + 1.0
Check tolerance
cm³/1000S. : + 3.0
Spreed
Tolerance
cm³/1000 strokes : 3.5
Check tolerance
cm³/1000S. : 8.0

CONTROL LEVER

control lever
position degree : 99.0
tolerance degree : + 4.0

RATED SPEED

rack travel mm : 10.35
Rated speed rpm : 1295
Tolerance 1/min : + 5

rack travel mm : 4.00
Rated speed rpm : 1355
Tolerance 1/min : + 15

rack travel mm : 0.85
Tolerance mm : + 0.55
Rated speed rpm : 1450

rack travel mm : 4.00
Rated speed rpm : 1365

LOW IDLE

control lever
position degree : 65.0
tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 325
rack travel mm : 8.90

Testing:

Rated speed rpm : 325
rack travel mm : 9.40
Tolerance mm : + 0.10

TORQUE CONTROL

Rated speed rpm : 1250
rack travel mm : 11.35
Tolerance mm : + 0.05

Rated speed rpm : 750
rack travel mm : 11.35
Tolerance mm : + 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : -
Rated speed rpm : 750
Del. quantity
cm³/1000 strokes : 70.0
Tolerance
cm³/1000 strokes : + 2.0
Check tolerance
cm³/1000S. : + 4.0

BREAKAWAY

Rack travel in mm : 10.35
Rated speed rpm : 1295
Tolerance 1/min : \pm 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.25
Tolerance mm : \pm 0.75
Del. quantity
cm³/1000 strokes : 120.0
Tolerance
cm³/1000 strokes : \pm 7.5
Check tolerance
cm³/1000s. : \pm 10.0

LOW IDLE

Rated speed rpm : 325
rack travel mm : 9.40
Tolerance mm : \pm 0.10
Del. quantity
cm³/1000 strokes : 21.0
Tolerance
cm³/1000 strokes : \pm 2.0
Check tolerance
cm³/1000s. : \pm 4.5
Spreed
Tolerance
cm³/1000 strokes : 5.5
Check tolerance
cm³/1000s. : 9.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 29.01.96
Test oil : ISO 4113
Combination No. : 0 400 864 099
Injection pump
Pump designation : PES4A95D410/3RS2789
EP type number : 0 410 894 995
Governor
Governor design. : RSV325...1250A5C858L
Governor no. : 0 420 232 621
Cust. part No. : 0423 1595 KY

Customer-spec. information
Customer : KHD-DMI
Motor : F4L912/913_NEU
Power KW : 54.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet temp. °C : 40
Tolerance °C : + 2.0
Overflow valve : 1 419 992 198
Inlet press. bar : 1.5
Test nozzle holder assembly : 0 681 343 009
Opening pressure bar : 173.5
Tolerance bar : + 1.5
Test lines : 1 680 750 014
Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : + 1.0

Prestroke mm : 3.00
Tolerance mm : + 0.05
Check tolerance mm : + 0.10

Rack travel in mm : 10.50
Tolerance mm : + 1.50

Firing order : 1- 3- 4- 2

Phasing : 0-90-180-270

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 11.35
Tolerance mm : + 0.05

Del. quantity cm³/1000 strokes : 76.0

Tolerance cm³/1000 strokes : + 1.0

Check tolerance cm³/1000S. : + 3.0

Speed Tolerance cm³/1000 strokes : 3.5

Check tolerance cm³/1000S. : 8.0

Rated speed rpm : 325

Rack travel in mm : 9.40
 Tolerance mm : + 0.10
 Del. quantity
 cm³/1000 strokes : 21.0
 Tolerance
 cm³/1000 strokes : + 2.0
 Check tolerance
 cm³/1000S. : + 4.5
 Spreed
 Tolerance
 cm³/1000 strokes : 5.5
 Check tolerance
 cm³/1000S. : 9.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800
 Rack travel in mm : 0.50
 Tolerance mm : + 0.20
 governor spring
 pre-tension
 click setting x : 2.25

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1250
 Aneroid pressure
 hPa : -
 Del. quantity
 cm³/1000 strokes : 76.0
 Tolerance
 cm³/1000 strokes : + 1.0
 Check tolerance
 cm³/1000S. : + 3.0
 Spreed
 Tolerance
 cm³/1000 strokes : 3.5
 Check tolerance
 cm³/1000S. : 8.0

CONTROL LEVER

control lever
 position degree : 99.0
 tolerance degree : + 4.0

RATED SPEED

rack travel mm : 10.35
 Rated speed rpm : 1295
 Tolerance 1/min : + 5

rack travel mm : 4.00
 Rated speed rpm : 1355
 Tolerance 1/min : + 15

rack travel mm : 0.85
 Tolerance mm : + 0.55
 Rated speed rpm : 1450

rack travel mm : 4.00
 Rated speed rpm : 1365

LOW IDLE

control lever
 position degree : 65.0
 tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 325
 rack travel mm : 8.90

Testing:

Rated speed rpm : 325
 rack travel mm : 9.40
 Tolerance mm : + 0.10

TORQUE CONTROL

Rated speed rpm : 1250
 rack travel mm : 11.35
 Tolerance mm : + 0.05

Rated speed rpm : 750
 rack travel mm : 11.35
 Tolerance mm : + 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
 hPa : -
 Rated speed rpm : 750
 Del. quantity
 cm³/1000 strokes : 70.0
 Tolerance
 cm³/1000 strokes : + 2.0

Check tolerance
cm³/1000S. : ± 4.0

BREAKAWAY

Rack travel in mm : 10.35
Rated speed rpm : 1295
Tolerance 1/min : ± 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.25
Tolerance mm : ± 0.75
Del. quantity
cm³/1000 strokes : 120.0
Tolerance
cm³/1000 strokes : ± 7.5
Check tolerance
cm³/1000S. : ± 10.0

LOW IDLE

Rated speed rpm : 325
rack travel mm : 9.40
Tolerance mm : ± 0.10
Del. quantity
cm³/1000 strokes : 21.0
Tolerance
cm³/1000 strokes : ± 2.0
Check tolerance
cm³/1000S. : ± 4.5
Speed
Tolerance
cm³/1000 strokes : 5.5
Check tolerance
cm³/1000S. : 9.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 29.01.96
Test oil : ISO 4113
Combination No. : 0 400 864 100
Injection pump
Pump designation : PES4A95D410/3RS2905
EP type number : 0 410 894 995
Governor
Governor design. : RSV325...900A1C859L
Governor no. : 0 420 232 622
Cust. part No. : 0423 1596 KY

Customer-spec. information
Customer : KHD-DMI
Motor : F4L912/913_NEU
Power KW : 54.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0
Overflow valve : 1 419 992 198
Inlet press. bar : 1.5
Test nozzle holde
assembly : 0 681 343 009
Opening pressure
bar : 173.5
Tolerance bar : ± 1.5
Test lines : 1 680 750 014
Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0
Prestroke mm : 3.00
Tolerance mm : ± 0.05
Check
tolerance mm : ± 0.10
Rack travel in mm : 10.50
Tolerance mm : ± 1.50
Firing order : 1- 3- 4- 2
Phasing : 0-90-180-270

BASIC SETTING

Del. quantity
cm3/1000 strokes : 80.0
Tolerance
cm3/1000 strokes : ± 1.0
Check tolerance
cm3/1000S. : ± 3.0
Speed
Tolerance
cm3/1000 strokes : 3.5
Check tolerance
cm3/1000S. : 8.0
Rated speed rpm : 325
Rack travel in mm : 9.40
Tolerance mm : ± 0.10
Del. quantity
cm3/1000 strokes : 21.0

Tolerance
cm³/1000 strokes : + 2.0
Check tolerance
cm³/1000S. : + 4.5
Spreed
Tolerance
cm³/1000 strokes : 5.5
Check tolerance
cm³/1000S. : 9.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800
Rack travel in mm : 0.50
Tolerance mm : + 0.20
governor spring
pre-tension
click setting x : 2.25

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 890
Aneroid pressure
hPa : -
Del. quantity
cm³/1000 strokes : 80.0
Tolerance
cm³/1000 strokes : + 1.0
Check tolerance
cm³/1000S. : + 3.0
Spreed
Tolerance
cm³/1000 strokes : 3.5
Check tolerance
cm³/1000S. : 8.0

CONTROL LEVER

control lever
position degree : 89.9
tolerance degree : + 4.0

RATED SPEED

rack travel mm : 10.80
Rated speed rpm : 898
Tolerance 1/min : + 5
rack travel mm : 4.00

Rated speed rpm : 918
Tolerance 1/min : + 10
rack travel mm : 0.85
Tolerance mm : + 0.55
Rated speed rpm : 1090
rack travel mm : 4.00
Rated speed rpm : 940

LOW IDLE

control lever
position degree : 68.0
tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 325
rack travel mm : 8.90

Testing:

rack travel mm : 2.00
Rated speed rpm : 425
Tolerance 1/min : + 30

BREAKAWAY

Rack travel in mm : 10.80
Rated speed rpm : 898
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.25
Tolerance mm : + 0.75
Del. quantity
cm³/1000 strokes : 120.0
Tolerance
cm³/1000 strokes : + 7.5
Check tolerance
cm³/1000S. : + 10.0

LOW IDLE

Rated speed rpm : 325
rack travel mm : 9.40
Tolerance mm : \pm 0.10
Del. quantity
cm³/1000 strokes : 21.0
Tolerance
cm³/1000 strokes : \pm 2.0
Check tolerance
cm³/1000S. : \pm 4.5
Spreed
Tolerance
cm³/1000 strokes : 5.5
Check tolerance
cm³/1000S. : 9.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 30.01.96
 Test oil : ISO 4113
 Combination No. : 0 400 864 101
 Injection pump
 Pump designation : PES4A95D410/3RS2789
 EP type number : 0 410 894 995
 Governor
 Governor design. : RSV325...1250A5C860L
 Governor no. : 0 420 232 623
 Cust. part No. : 0423 1788 KY

Customer-spec. information
 Customer : KHD-DMI
 Motor : F4L912/913_NEU
 Power KW : 59.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1
 Test oil inlet temp. °C : 40
 Tolerance °C : ± 2.0
 Overflow valve : 1 419 992 198
 Inlet press. bar : 1.5
 Test nozzle holder assembly : 0 681 343 009
 Opening pressure bar : 173.5
 Tolerance bar : ± 1.5
 Test Lines : 1 680 750 014
 Outside diameter : 6.0

x inside diameter : 2.0
 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
 Set equal delivery quant.
 per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
 Tolerance bar : ± 1.0

Prestroke mm : 3.00
 Tolerance mm : ± 0.05
 Check tolerance mm : ± 0.10

Rack travel in mm : 10.50
 Tolerance mm : ± 1.50

Firing order : 1- 3- 4- 2

Phasing : 0-90-180-270

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 11.35
 Tolerance mm : ± 0.05

Del. quantity cm³/1000 strokes : 76.0

Tolerance cm³/1000 strokes : ± 1.0

Check tolerance cm³/1000S. : ± 3.0

Spread Tolerance cm³/1000 strokes : 3.5

Check tolerance cm³/1000S. : 8.0

Rated speed rpm : 325

Rack travel in mm : 9.40
 Tolerance mm : + 0.10
 Del. quantity
 cm³/1000 strokes : 21.0
 Tolerance
 cm³/1000 strokes : + 2.0
 Check tolerance
 cm³/1000S. : + 4.5
 Spreed
 Tolerance
 cm³/1000 strokes : 5.5
 Check tolerance
 cm³/1000S. : 9.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800
 Rack travel in mm : 0.50
 Tolerance mm : + 0.20
 governor spring
 pre-tension
 click setting x : 2.25

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1250
 Aneroid pressure
 hPa : -
 Del. quantity
 cm³/1000 strokes : 76.0
 Tolerance
 cm³/1000 strokes : + 1.0
 Check tolerance
 cm³/1000S. : + 3.0
 Spreed
 Tolerance
 cm³/1000 strokes : 3.5
 Check tolerance
 cm³/1000S. : 8.0

CONTROL LEVER

control lever
 position degree : 99.0
 tolerance degree : + 4.0

RATED SPEED

rack travel mm : 10.35
 Rated speed rpm : 1295
 Tolerance 1/min : + 5

rack travel mm : 4.00
 Rated speed rpm : 1355
 Tolerance 1/min : + 15

rack travel mm : 0.85
 Tolerance mm : + 0.55
 Rated speed rpm : 1450

rack travel mm : 4.00
 Rated speed rpm : 1365

LOW IDLE

control lever
 position degree : 65.0
 tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 325
 rack travel mm : 8.90

Testing:

Rated speed rpm : 325
 rack travel mm : 9.40
 Tolerance mm : + 0.10

TORQUE CONTROL

Rated speed rpm : 1250
 rack travel mm : 11.35
 Tolerance mm : + 0.05

Rated speed rpm : 750
 rack travel mm : 11.35
 Tolerance mm : + 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
 hPa : -
 Rated speed rpm : 750
 Del. quantity
 cm³/1000 strokes : 70.0
 Tolerance
 cm³/1000 strokes : + 2.0

Check tolerance
cm³/1000S. : ± 4.0

BREAKAWAY

Rack travel in mm : 10.35
Rated speed rpm : 1295
Tolerance 1/min : ± 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.25
Tolerance mm : ± 0.75
Del. quantity
cm³/1000 strokes : 120.0
Tolerance
cm³/1000 strokes : ± 7.5
Check tolerance
cm³/1000S. : ± 10.0

LOW IDLE

Rated speed rpm : 325
rack travel mm : 9.40
Tolerance mm : ± 0.10
Del. quantity
cm³/1000 strokes : 21.0
Tolerance
cm³/1000 strokes : ± 2.0
Check tolerance
cm³/1000S. : ± 4.5
Spreed
Tolerance
cm³/1000 strokes : 5.5
Check tolerance
cm³/1000S. : 9.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 29.01.96
Test oil : ISO 4113
Combination No. : 0 400 864 102
Injection pump
Pump designation : PES4A95D410/3RS2789
EP type number : 0 410 894 995
Governor
Governor design. : RSV325...1250A5C861L
Governor no. : 0 420 232 624
Cust. part No. : 0423 1789 KY

Customer-spec. information
Customer : KHD-DMI
Motor : F4L912/913_NEU
Power KW : 59.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet temp. °C : 40
Tolerance °C : +- 2.0
Overflow valve : 1 419 992 198
Inlet press. bar : 1.5
Test nozzle holde assembly : 0 681 343 009
Opening pressure bar : 173.5
Tolerance bar : +- 1.5
Test lines : 1 680 750 014
Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : +- 1.0

Prestroke mm : 3.00
Tolerance mm : +- 0.05
Check tolerance mm : +- 0.10

Rack travel in mm : 10.50
Tolerance mm : +- 1.50

Firing order : 1- 3- 4- 2

Phasing : 0-90-180-270

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 11.35
Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 76.0

Tolerance cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000S. : +- 3.0

Spread Tolerance cm3/1000 strokes : 3.5

Check tolerance cm3/1000S. : 8.0

Rated speed rpm : 325

Rack travel in mm : 9.40
 Tolerance mm : +- 0.10
 Del. quantity
 cm3/1000 strokes : 21.0
 Tolerance
 cm3/1000 strokes : +- 2.0
 Check tolerance
 cm3/1000S. : +- 4.5
 Spreed
 Tolerance
 cm3/1000 strokes : 5.5
 Check tolerance
 cm3/1000S. : 9.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800
 Rack travel in mm : 0.50
 Tolerance mm : +- 0.20
 governor spring
 pre-tension
 click setting x : 2.25

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1250
 Aneroid pressure
 hPa : -
 Del. quantity
 cm3/1000 strokes : 76.0
 Tolerance
 cm3/1000 strokes : +- 1.0
 Check tolerance
 cm3/1000S. : +- 3.0
 Spreed
 Tolerance
 cm3/1000 strokes : 3.5
 Check tolerance
 cm3/1000S. : 8.0

CONTROL LEVER

control lever
 position degree : 99.0
 tolerance degree : +- 4.0

RATED SPEED

rack travel mm : 10.35
 Rated speed rpm : 1295
 Tolerance 1/min : +- 5

rack travel mm : 4.00
 Rated speed rpm : 1355
 Tolerance 1/min : +- 15

rack travel mm : 0.85
 Tolerance mm : +- 0.55
 Rated speed rpm : 1450

rack travel mm : 4.00
 Rated speed rpm : 1365

LOW IDLE

control lever
 position degree : 65.0
 tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 325
 rack travel mm : 8.90

Testing:

Rated speed rpm : 325
 rack travel mm : 9.40
 Tolerance mm : +- 0.10

TORQUE CONTROL

Rated speed rpm : 1250
 rack travel mm : 11.35
 Tolerance mm : +- 0.05

Rated speed rpm : 750
 rack travel mm : 11.35
 Tolerance mm : +- 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
 hPa : -
 Rated speed rpm : 750
 Del. quantity
 cm3/1000 strokes : 70.0
 Tolerance
 cm3/1000 strokes : +- 2.0

Check tolerance
cm³/1000S. : ± 4.0

BREAKAWAY

Rack travel in mm : 10.35
Rated speed rpm : 1295
Tolerance 1/min : ± 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.25
Tolerance mm : ± 0.75
Del. quantity
cm³/1000 strokes : 120.0
Tolerance
cm³/1000 strokes : ± 7.5
Check tolerance
cm³/1000S. : ± 10.0

LOW IDLE

Rated speed rpm : 325
rack travel mm : 9.40
Tolerance mm : ± 0.10
Del. quantity
cm³/1000 strokes : 21.0
Tolerance
cm³/1000 strokes : ± 2.0
Check tolerance
cm³/1000S. : ± 4.5
Spreed
Tolerance
cm³/1000 strokes : 5.5
Check tolerance
cm³/1000S. : 9.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 30.01.96
Test oil : ISO 4113
Combination No. : 0 400 865 028
Injection pump
Pump designation : PES5A95D410/3RS2906
EP type number : 0 410 895 971
Governor
Governor design. : RSV325...1250A5C858L
Governor no. : 0 420 232 621
Cust. part No. : 0423 1598 KY

Customer-spec. information
Customer : KHD-DMI
Motor : F5L912/913_NEU
Power KW : 67.5

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet temp. °C : 40
Tolerance °C : +- 2.0
Overflow valve : 1 419 992 198
Inlet press. bar : 1.5
Test nozzle holder assembly : 0 681 343 009
Opening pressure bar : 173.5
Tolerance bar : +- 1.5
Test lines : 1 680 750 014
Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : +- 1.0

Prestroke mm : 3.00
Tolerance mm : +- 0.05
Check tolerance mm : +- 0.10

Rack travel in mm : 10.50
Tolerance mm : +- 1.50

Firing order : 1- 3- 5- 4- 2

Phasing : 0-72-144-216-288

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 11.35
Tolerance mm : +- 0.05

Del. quantity cm³/1000 strokes : 70.0

Tolerance cm³/1000 strokes : +- 1.0

Check tolerance cm³/1000S. : +- 3.0

Spread Tolerance cm³/1000 strokes : 3.5

Check tolerance cm³/1000S. : 8.0

Rated speed rpm : 325

Rack travel in mm : 9.40
 Tolerance mm : ± 0.10
 Del. quantity
 cm³/1000 strokes : 21.0
 Tolerance
 cm³/1000 strokes : ± 2.0
 Check tolerance
 cm³/1000s. : ± 4.5
 Spreed
 Tolerance
 cm³/1000 strokes : 5.5
 Check tolerance
 cm³/1000s. : 9.0

(B) SETTING OF INJECTION PUMP
 WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800
 Rack travel in mm : 0.50
 Tolerance mm : ± 0.20
 governor spring
 pre-tension
 click setting x : 2.25

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1250
 Aneroid pressure
 hPa : -
 Del. quantity
 cm³/1000 strokes : 70.0
 Tolerance
 cm³/1000 strokes : ± 1.0
 Check tolerance
 cm³/1000s. : ± 3.0
 Spreed
 Tolerance
 cm³/1000 strokes : 3.5
 Check tolerance
 cm³/1000s. : 8.0

CONTROL LEVER

control lever
 position degree : 99.0
 tolerance degree : ± 4.0

RATED SPEED

rack travel mm : 10.35
 Rated speed rpm : 1295
 Tolerance 1/min : ± 5

rack travel mm : 4.00
 Rated speed rpm : 1355
 Tolerance 1/min : ± 15

rack travel mm : 0.85
 Tolerance mm : ± 0.55
 Rated speed rpm : 1450

rack travel mm : 4.00
 Rated speed rpm : 1365

LOW IDLE

control lever
 position degree : 65.0
 tolerance degree : ± 4.0

Setting point w/out bumper spring

Rated speed rpm : 325
 rack travel mm : 8.90

Testing:

Rated speed rpm : 325
 rack travel mm : 9.40
 Tolerance mm : ± 0.10

TORQUE CONTROL

Rated speed rpm : 1250
 rack travel mm : 11.35
 Tolerance mm : ± 0.05

Rated speed rpm : 750
 rack travel mm : 11.35
 Tolerance mm : ± 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
 hPa : -
 Rated speed rpm : 750
 Del. quantity
 cm³/1000 strokes : 62.0
 Tolerance
 cm³/1000 strokes : ± 2.0

Check tolerance
cm³/1000S. : +- 4.0

BREAKAWAY

Rack travel in mm : 10.35
Rated speed rpm : 1295
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.25
Tolerance mm : +- 0.75
Del. quantity
cm³/1000 strokes : 120.0
Tolerance
cm³/1000 strokes : +- 7.5
Check tolerance
cm³/1000S. : +- 10.0

LOW IDLE

Rated speed rpm : 325
rack travel mm : 9.40
Tolerance mm : +- 0.10
Del. quantity
cm³/1000 strokes : 21.0
Tolerance
cm³/1000 strokes : +- 2.0
Check tolerance
cm³/1000S. : +- 4.5
Spreed
Tolerance
cm³/1000 strokes : 5.5
Check tolerance
cm³/1000S. : 9.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 31.01.96
Test oil : ISO 4113
Combination No. : 0 400 866 082
Injection pump
Pump designation : PES6A85D410/3RS2415
EP type number : 0 410 886 915
Governor
Governor design. : RS325/1325A0C709DL
Governor no. : 0 420 220 009

Cust. part No. :

Customer-spec. information
Customer : KHD
Motor : BF6L913

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0
Overflow valve : 1 419 992 198
Inlet press. bar : 1.5
Test nozzle holde
assembly : 0 681 343 009
Opening pressure
bar : 173.5
Tolerance bar : ± 1.5
Test lines : 1 680 750 014
Outside diameter : 6.0
x inside diameter : 2.0

L25

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0
Prestroke mm : 1.95
Tolerance mm : ± 0.05
Check
tolerance mm : ± 0.10
Rack travel in mm : 10.50
Tolerance mm : ± 1.50
Firing order : 1- 5- 3- 6- 2-
: 4
Phasing : 0-60-120-180-240
: -300

BASIC SETTING

Rated speed rpm : 1325
Rack travel in mm : 12.05
Tolerance mm : ± 0.05
Del. quantity
cm³/1000 strokes : 87.0
Tolerance
cm³/1000 strokes : ± 0.5
Check tolerance
cm³/1000S. : ± 2.5
Speed
Tolerance
cm³/1000 strokes : 3.0
Check tolerance
cm³/1000S. : 7.0

Rated speed rpm : 325

Rack travel in mm : 8.30
 Tolerance mm : +- 0.10

Del. quantity
 cm³/1000 strokes : 16.5
 Tolerance
 cm³/1000 strokes : +- 2.0
 Check tolerance
 cm³/1000S. : +- 4.0

Spreed
 Tolerance
 cm³/1000 strokes : 4.5
 Check tolerance
 cm³/1000S. : 7.0

(B) SETTING OF INJECTION PUMP
 WITH GOVERNOR

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1325
 Aneroid pressure
 hPa : 700

Del. quantity
 cm³/1000 strokes : 87.0
 Tolerance
 cm³/1000 strokes : +- 0.5
 Check tolerance
 cm³/1000S. : +- 2.5

Spreed
 Tolerance
 cm³/1000 strokes : 3.0
 Check tolerance
 cm³/1000S. : 7.0

CONTROL LEVER

control lever
 position degree : 68.0
 tolerance degree : +- 4.0

RATED SPEED

rack travel mm : 11.00
 Rated speed rpm : 1360
 Tolerance 1/min : +- 5

rack travel mm : 4.00
 Rated speed rpm : 1465
 Tolerance 1/min : +- 15

rack travel mm : 0.85
 Tolerance mm : +- 0.55

Rated speed rpm : 1600

LOW IDLE

Setting point w/out bumper spring

Rated speed rpm : 500
 rack travel mm : 3.70

Testing:

Rated speed rpm : 325
 rack travel mm : 6.50
 Tolerance mm : +- 0.10

rack travel mm : 2.00
 Rated speed rpm : 375
 Tolerance 1/min : +- 25

Rated speed rpm : 100

CRT mm min. : 14.75

TORQUE CONTROL

Rated speed rpm : 1325
 rack travel mm : 12.05
 Tolerance mm : +- 0.05

Rated speed rpm : 500
 rack travel mm : 12.10
 Tolerance mm : +- 0.10

Rated speed rpm : 800
 rack travel mm : 12.10
 Tolerance mm : +- 0.10

ANEROID/ALTITUDE
 COMPENSATOR TEST

SETTING

Rated speed rpm : 500
 Pressure hPa : 700
 rack travel mm : 12.05
 Tolerance mm : +- 0.05

MEASUREMENT

Pressure hPa : -
 Rated speed rpm : 500
 rack travel mm : 10.75
 Tolerance mm : +- 0.05

Rated speed rpm : 500

Pressure hPa : 266
rack travel mm : 11.30
Tolerance mm : ± 0.10

Pressure hPa : 373
rack travel mm : 11.75
Tolerance mm : ± 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 700
Rated speed rpm : 800
Del. quantity
cm³/1000 strokes : 78.5
Tolerance
cm³/1000 strokes : ± 1.5
Check tolerance
cm³/1000S. : ± 3.5

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 57.0
Tolerance
cm³/1000 strokes : ± 0.5
Check tolerance
cm³/1000S. : ± 2.5

BREAKAWAY

Rack travel in mm : 11.00
Rated speed rpm : 1360
Tolerance 1/min : ± 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 16.50
Tolerance mm : ± 0.20
Del. quantity
cm³/1000 strokes : 108.0
Tolerance
cm³/1000 strokes : ± 7.5
Check tolerance
cm³/1000S. : ± 10.0

LOW IDLE

L27

Rated speed rpm : 325
rack travel mm : 8.30
Tolerance mm : ± 0.10
Del. quantity
cm³/1000 strokes : 16.5
Tolerance
cm³/1000 strokes : ± 2.0
Check tolerance
cm³/1000S. : ± 4.0
Spreed
Tolerance
cm³/1000 strokes : 4.5
Check tolerance
cm³/1000S. : 7.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 29.01.96
Test oil : ISO 4113
Combination No. : 0 400 866 224
Injection pump
Pump designation : PES3A95D410/3RS2905
EP type number :
Governor
Governor design. : RSV325...1250A5C858L
Governor no. :
Cust. part No. : 0423 1592 KY

Customer-spec. information
Customer : KHD-DMI
Motor : F3L912/913_NEU
Power KW : 40.5

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet temp. °C : 40
Tolerance °C : ± 2.0
Overflow valve : 1 419 992 198
Inlet press. bar : 1.5
Test nozzle holder assembly : 0 681 343 009
Opening pressure bar : 173.5
Tolerance bar : ± 1.5
Test lines : 1 680 750 014
Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0

Prestroke mm : 3.00
Tolerance mm : ± 0.05
Check tolerance mm : ± 0.10

Rack travel in mm : 10.50
Tolerance mm : ± 1.50

Firing order : 1- 3- 2

Phasing : 0-120-240

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 11.35
Tolerance mm : ± 0.05

Del. quantity cm³/1000 strokes : 76.0

Tolerance cm³/1000 strokes : ± 1.0

Check tolerance cm³/1000s. : ± 3.0

Spread Tolerance cm³/1000 strokes : 3.5

Check tolerance cm³/1000s. : 8.0

Rated speed rpm : 325

Rack travel in mm : 9.40
 Tolerance mm : + 0.10
 Del. quantity
 cm³/1000 strokes : 21.0
 Tolerance
 cm³/1000 strokes : + 2.0
 Check tolerance
 cm³/1000S. : + 4.5
 Spreed
 Tolerance
 cm³/1000 strokes : 5.5
 Check tolerance
 cm³/1000S. : 9.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800
 Rack travel in mm : 0.50
 Tolerance mm : + 0.20
 governor spring
 pre-tension
 click setting x : 2.25

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1250
 Aneroid pressure
 hPa : -
 Del. quantity
 cm³/1000 strokes : 76.0
 Tolerance
 cm³/1000 strokes : + 1.0
 Check tolerance
 cm³/1000S. : + 3.0
 Spreed
 Tolerance
 cm³/1000 strokes : 3.5
 Check tolerance
 cm³/1000S. : 8.0

CONTROL LEVER

control lever
 position degree : 99.0
 tolerance degree : + 4.0

RATED SPEED

rack travel mm : 10.35
 Rated speed rpm : 1295
 Tolerance 1/min : + 5

rack travel mm : 4.00
 Rated speed rpm : 1355
 Tolerance 1/min : + 15

rack travel mm : 0.85
 Tolerance mm : + 0.55
 Rated speed rpm : 1450

rack travel mm : 4.00
 Rated speed rpm : 1365

LOW IDLE

control lever
 position degree : 65.0
 tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 325
 rack travel mm : 8.90

Testing:

Rated speed rpm : 325
 rack travel mm : 9.40
 Tolerance mm : + 0.10

rack travel mm : 2.00
 Rated speed rpm : 500
 Tolerance 1/min : + 30

TORQUE CONTROL

Rated speed rpm : 1250
 rack travel mm : 11.35
 Tolerance mm : + 0.05

Rated speed rpm : 750
 rack travel mm : 11.35
 Tolerance mm : + 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
 hPa : -
 Rated speed rpm : 750

Del. quantity
cm³/1000 strokes : 70.0
Tolerance
cm³/1000 strokes : ± 2.0
Check tolerance
cm³/1000s. : ± 4.0

BREAKAWAY

Rack travel in mm : 10.35
Rated speed rpm : 1295
Tolerance 1/min : ± 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.25
Tolerance mm : ± 0.75
Del. quantity
cm³/1000 strokes : 120.0
Tolerance
cm³/1000 strokes : ± 7.5
Check tolerance
cm³/1000s. : ± 10.0

LOW IDLE

Rated speed rpm : 325
rack travel mm : 9.40
Tolerance mm : ± 0.10
Del. quantity
cm³/1000 strokes : 21.0
Tolerance
cm³/1000 strokes : ± 2.0
Check tolerance
cm³/1000s. : ± 4.5
Speed
Tolerance
cm³/1000 strokes : 5.5
Check tolerance
cm³/1000s. : 9.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 24.01.96
Test oil : ISO 4113
Combination No. : 9 400 030 708
Injection pump
Pump designation : PES6A100D320/3RS3506
EP type number : 9 410 037 236
Governor
Governor design. : RQV400...1250AB1301R
Governor no. : 9 420 030 158
Cust. part No. : TATA-CUMMINS

Customer-spec. information
Customer : CUMMINS
Motor : 6BT - 125 ps

TEST BENCH REQUIREMENTS

Inlet Line : 1.1;
Test oil inlet
temp. °C : 40
Tolerance °C : +- 2.0
Overflow valve : 9 451 037 430
Inlet press. bar : 2.0
Tolerance bar : +- 0.1
Test nozzle holde
assembly : 1 688 901 101
Opening pressure
bar : 208.5
Tolerance bar : +- 1.5
Test Lines : 1 680 750 014
Outside diameter : 6.0

M03

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : +- 1.0

Prestroke mm : 3.60
Tolerance mm : +- 0.05
Check
tolerance mm : +- 0.10

Rack travel in mm : 10.50
Tolerance mm : +- 1.50

Firing order : 1- 5- 3- 6- 2-
: 4

Phasing : 0-60-120-180-240
: -300

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 10.30
Tolerance mm : +- 0.05

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm : 400
guide sleeve
travel mm : 1.71
Tolerance mm : +- 0.20

Rated speed rpm : 1347
guide sleeve
travel mm : 8.48

Tolerance mm : +- 0.15
Rated speed rpm : 880
guide sleeve
travel mm : 4.97
Tolerance mm : +- 0.25
Rated speed rpm : 499
guide sleeve
travel mm : 2.75
Tolerance mm : +- 0.25
Rated speed rpm : 549
guide sleeve
travel mm : 3.30
Tolerance mm : +- 0.25
Rated speed rpm : 560
guide sleeve
travel mm : 3.37
Tolerance mm : +- 0.25
Rated speed rpm : 1620
guide sleeve
travel mm : 11.50
Tolerance mm : +- 0.50

GUIDE SLEEVE POSITION

Rated speed rpm : 1250
Rack travel in mm : 16.00
Tolerance mm : +- 1.30

CONTROL LEVER

control lever
position degree : 61.0
tolerance degree : +- 4.0

RATED SPEED

rack travel mm : 9.30
Rated speed rpm : 1335
Tolerance 1/min : +- 5
rack travel mm : 4.00
Rated speed rpm : 1430
Tolerance 1/min : +- 15
rack travel mm : 0.50
Tolerance mm : +- 0.50
Rated speed rpm : 1490

LOW IDLE

MO4

control lever
position degree : 15.0
tolerance degree : +- 4.0

Testing:

Rated speed rpm : 400
rack travel mm : 6.40
Tolerance mm : +- 0.10
rack travel mm : 2.00
Rated speed rpm : 630
Tolerance 1/min : +- 30
Rated speed rpm : 100
CRT mm min. : > 9.00

TORQUE CONTROL

Rated speed rpm : 1250
rack travel mm : 10.30
Tolerance mm : +- 0.05
Rated speed rpm : 550
rack travel mm : 10.30
Tolerance mm : +- 0.10
Rated speed rpm : 750
rack travel mm : 10.30
Tolerance mm : +- 0.15

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 800
Pressure hPa : 1000
rack travel mm : 10.30
Tolerance mm : +- 0.05

MEASUREMENT

Rated speed rpm : 800
Pressure hPa : -
rack travel mm : 10.30
Tolerance mm : +- 0.05
Pressure hPa : 500
rack travel mm : 10.30
Tolerance mm : +- 0.05

START CUT-OUT

Rated speed rpm : > 120
Rated speed rpm : < 300

Check
speed 1/min : > 100
Check
speed 1/min : < 340

BREAKAWAY

Rack travel in mm : 9.30
Rated speed rpm : 1335
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 14.40
Tolerance mm : + 0.50

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 14.09.94
Test oil : ISO 4113
Combination No. : 9 400 085 315
Injection pump
Pump designation : PES6A95D410RS2772
EP type number : 9 400 084 018
Governor
Governor design. : RQV300...1300AB1066
 : -9L
Governor no. : 9 420 080 282
Cust. part No. :

Customer-spec. information
Customer : MBB
Motor : OM 366 A
Power KW : 125.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet
temp. °C : 40
Tolerance °C : + 2.0
Overflow valve : 1 419 992 198
Inlet press. bar : 1.5
Test nozzle holde
assembly : 0 681 343 009
Opening pressure
bar : 173.5
Tolerance bar : + 1.5
Test lines : 1 680 750 015
Outside diameter : 6.0

M06

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : + 1.0
Prestroke mm : 3.25
Tolerance mm : + 0.05
Check
tolerance mm : + 0.10
Rack travel in mm : 10.50
Tolerance mm : + 1.50
Firing order : 1- 5- 3- 6- 2-
 : 4
Phasing : 0-60-120-180-240
 : -300

BASIC SETTING

Rated speed rpm : 1300
Rack travel in mm : 10.45
Tolerance mm : + 0.05
Del. quantity
cm3/1000 strokes : 88.0
Tolerance
cm3/1000 strokes : + 1.0
Check tolerance
cm3/1000S. : + 3.0
Spreed
Tolerance
cm3/1000 strokes : 3.5
Check tolerance
cm3/1000S. : 8.0

Del. quantity
 cm³/1000 strokes : 11.5
 Tolerance
 cm³/1000 strokes : ± 2.0
 Check tolerance
 cm³/1000S. : ± 4.5
 Spreed
 Tolerance
 cm³/1000 strokes : 3.5
 Check tolerance
 cm³/1000S. : 9.0

(B) SETTING OF INJECTION PUMP
 WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm : 300
 guide sleeve
 travel mm : 1.05
 Tolerance mm : ± 0.25

Rated speed rpm : 1500
 guide sleeve
 travel mm : 8.55
 Tolerance mm : ± 0.05

Rated speed rpm : 500
 guide sleeve
 travel mm : 2.55
 Tolerance mm : ± 0.25

Rated speed rpm : 750
 guide sleeve
 travel mm : 4.20
 Tolerance mm : ± 0.10

GUIDE SLEEVE POSITION

Rated speed rpm : 1500

Rack travel in mm : 16.50
 Tolerance mm : ± 1.30

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1300
 Aneroid pressure
 hPa : 800
 Del. quantity
 cm³/1000 strokes : 88.0
 Tolerance
 cm³/1000 strokes : ± 1.0
 Check tolerance
 cm³/1000S. : ± 3.0

M07

Spreed
 Tolerance
 cm³/1000 strokes : 3.5
 Check tolerance
 cm³/1000S. : 8.0

CONTROL LEVER

control lever
 position degree : 109.0
 tolerance degree : ± 4.0

RATED SPEED

rack travel mm : 9.40
 Rated speed rpm : 1365
 Tolerance 1/min : ± 5

rack travel mm : 4.00
 Rated speed rpm : 1485
 Tolerance 1/min : ± 15

rack travel mm : 0.50
 Tolerance mm : ± 0.50
 Rated speed rpm : 1650

LOW IDLE

control lever
 position degree : 68.0
 tolerance degree : ± 4.0

Testing:

Rated speed rpm : 300
 rack travel mm : 7.00
 Tolerance mm : ± 0.10

Rated speed rpm : 100

CRT mm min. : > 8.00

Rated speed rpm : 375

TORQUE CONTROL

Rated speed rpm : 1300
 rack travel mm : 10.45
 Tolerance mm : ± 0.05

Rated speed rpm : 800
 rack travel mm : 10.95
 Tolerance mm : ± 0.05

Rated speed rpm : 1000
rack travel mm : 10.70
Tolerance mm : ± 0.10

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 800
rack travel mm : 10.95
Tolerance mm : ± 0.05

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 500

Rated speed rpm : 500

Pressure hPa : 300
rack travel mm : 0.50
Tolerance mm : ± 0.10

Pressure hPa : 460
rack travel mm : 1.15
Tolerance mm : ± 0.05

START CUT-OUT

Rated speed rpm : > 100
Rated speed rpm : < 220

Check
speed 1/min : > 80
Check
speed 1/min : < 240

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 800
Rated speed rpm : 800
Del. quantity
cm³/1000 strokes : 85.0
Tolerance
cm³/1000 strokes : ± 2.0
Check tolerance
cm³/1000S. : ± 4.0

Aneroid pressure
hPa : 800
Rated speed rpm : 1000
Del. quantity
cm³/1000 strokes : 87.5

Tolerance
cm³/1000 strokes : ± 2.0
Check tolerance
cm³/1000S. : ± 4.0

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 51.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 3.0

BREAKAWAY

Rack travel in mm : 9.40
Rated speed rpm : 1365
Tolerance 1/min : ± 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 13.70
Tolerance mm : ± 0.10
Del. quantity
cm³/1000 strokes : 85.0
Tolerance
cm³/1000 strokes : ± 7.5
Check tolerance
cm³/1000S. : ± 10.0

LOW IDLE

Del. quantity
cm³/1000 strokes : 11.5
Tolerance
cm³/1000 strokes : ± 2.0
Check tolerance
cm³/1000S. : ± 4.5
Speed
Tolerance
cm³/1000 strokes : 3.5
Check tolerance
cm³/1000S. : 9.0

End of test specification sheet



BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 05.02.96
Test oil : ISO 4113
Combination No. : 0 402 066 704
Injection pump
Pump designation : PES6P120A120RS3358
EP type number : 0 412 026 784
Governor
Governor design. : RSV475...1250P2A613
Governor no. : 0 421 833 501

Cust. part No. : 3927359

Customer-spec. information
Customer : CDC
Motor : 6BTA-590 ELITE
Power KW : 149.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2
Test oil inlet
temp. °C : 40
Tolerance °C : + 2.0
Overflow valve : 2 417 413 086
Inlet press. bar : 1.5
Test nozzle holde
assembly : 1 688 901 103
Opening pressure
bar : 208.5
Tolerance bar : + 1.5
Test Lines : 1 680 750 089
Outside diameter : 8.0

M10

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : + 1.0
Prestroke mm : 2.85
Tolerance mm : + 0.05
Check
tolerance mm : + 0.10
Rack travel in mm : 10.50
Tolerance mm : + 1.50
Firing order : 1- 5- 3- 6- 2-
: 4
Phasing : 0-60-120-180-240
: -300
Tolerance : + 0.30
Check
tolerance °NW : + 0.50
Start of delivery blocking
°NW after s.o.d. : 7.50
Tolerance : + 0.50
Check
tolerance °NW : + 0.75
Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1250
Rack travel in mm : 11.90
Tolerance mm : + 0.05

Del. quantity
cm³/1000 strokes : 152.0

Tolerance
cm³/1000 strokes : +- 1.0

Check tolerance
cm³/1000S. : +- 3.0

Spreed
Tolerance
cm³/1000 strokes : 4.0

Check tolerance
cm³/1000S. : 7.5

Rated speed rpm : 475

Rack travel in mm : 5.50
Tolerance mm : +- 0.30

Del. quantity
cm³/1000 strokes : 22.0
Tolerance
cm³/1000 strokes : +- 2.0
Check tolerance
cm³/1000S. : +- 4.5

Spreed
Tolerance
cm³/1000 strokes : 6.0
Check tolerance
cm³/1000S. : 9.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800

Rack travel in mm : 0.50
Tolerance mm : +- 0.20

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1250
Aneroid pressure
hPa : 1500
Del. quantity
cm³/1000 strokes : 152.0
Tolerance
cm³/1000 strokes : +- 1.0
Check tolerance
cm³/1000S. : +- 3.0
Spreed
Tolerance
cm³/1000 strokes : 4.0

Check tolerance
cm³/1000S. : 7.5

CONTROL LEVER

control lever
position degree : 110.0
tolerance degree : +- 4.0

RATED SPEED

rack travel mm : 10.90
Rated speed rpm : 1320
Tolerance 1/min : +- 5

rack travel mm : 4.00
Rated speed rpm : 1420
Tolerance 1/min : +- 15

rack travel mm : 0.85
Tolerance mm : +- 0.55
Rated speed rpm : 1500

LOW IDLE

control lever
position degree : 84.0
tolerance degree : +- 4.0

Testing:

Rated speed rpm : 475
rack travel mm : 5.50
Tolerance mm : +- 0.10

rack travel mm : 2.00
Rated speed rpm : 570
Tolerance 1/min : +- 30

SET IDLE AUXILIARY SPRING

rack travel mm : 2.00

TORQUE CONTROL

Rated speed rpm : 1250
rack travel mm : 11.90
Tolerance mm : +- 0.05

Rated speed rpm : 750
rack travel mm : 11.90
Tolerance mm : +- 0.10

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1500
rack travel mm : 11.90
Tolerance mm : ± 0.05

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 500
rack travel mm : 9.10
Tolerance mm : ± 0.20

Rated speed rpm : 500

Pressure hPa : 975
rack travel mm : 11.20
Tolerance mm : ± 0.20

Pressure hPa : 575
rack travel mm : 9.50
Tolerance mm : ± 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 1500
Rated speed rpm : 750
Del. quantity
cm³/1000 strokes : 170.0
Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 6.0
Spreed
Tolerance
cm³/1000 strokes : 12.0
Check tolerance
cm³/1000S. : 16.0

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 99.0
Tolerance
cm³/1000 strokes : ± 2.0
Check tolerance
cm³/1000S. : ± 4.0

BREAKAWAY

Rack travel in mm : 10.90
Rated speed rpm : 1320
Tolerance 1/min : ± 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.25
Tolerance mm : ± 0.75
Del. quantity
cm³/1000 strokes : 165.0
Tolerance
cm³/1000 strokes : ± 20.0
Check tolerance
cm³/1000S. : ± 25.0

LOW IDLE

Rated speed rpm : 475
rack travel mm : 5.50
Tolerance mm : ± 0.30
Del. quantity
cm³/1000 strokes : 22.0
Tolerance
cm³/1000 strokes : ± 2.0
Check tolerance
cm³/1000S. : ± 4.5
Spreed
Tolerance
cm³/1000 strokes : 6.0
Check tolerance
cm³/1000S. : 9.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 02.02.96
Test oil : ISO 4113
Combination No. : 0 402 896 009

Injection pump
Pump designation : PE6P120A32ORS8020
EP type number : 0 412 826 021

Governor
Governor design. : RE30
Governor no. : 0 421 890 010

Cust. part No. : 479889-P03 V.08/95

Customer-spec. information
Customer : VOLVO-TRUCK
Motor : TD123,TD103 E ES
Power KW : 290.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5
Tolerance bar : ± 0.1

Test nozzle holder
assembly : 1 688 901 103

Opening pressure
bar : 208.5
Tolerance bar : ± 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

Pump-specific values
in Section (B)
must be observed!

(A) INJECTION PUMP SETTINGS
No basic setting.
Setting of constant delivery
under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 31.0
Tolerance bar : ± 1.0

Prestroke mm : 4.05

Prestroke mm : 4.00
Tolerance mm : ± 0.05
Tolerance mm : ± 0.05

Check
tolerance mm : ± 0.10
Check
tolerance mm : ± 0.10

Rack travel in mm : 10.50

Rack travel in mm : 10.50
Tolerance mm : ± 0.50
Tolerance mm : ± 0.50

Firing order : 1- 5- 3- 6- 2-
: 4

Phasing : 0-60-120-180-240
: -300
Tolerance : ± 0.30
Check
tolerance °NW : ± 0.75

Start of delivery mark

Barrel no. : 1

(B) POSITIONER TESTING

Warm-up time: 3 minutes at
n=600 min⁻¹, Uact = 2.5 V

TESTING & SETTING RACK TRAVEL SENSOR
POSITION

Engine speed min⁻¹: 0

Setting point
(P, R and H pump)

Uact V : 3.100
CRT mm : 13.00
Tolerance mm : +/- 0.05
Check
tolerance mm : +/- 0.10

Check value
(P, R and H pump)

Uact V : 1.700
CRT mm : 6.15
Tolerance mm : +/- 0.25
Check
tolerance mm : +/- 0.30

Setting point
(M pump)

Uact V : 3.100
CRT mm : 12.50
Tolerance mm : +/- 0.05
Check
tolerance mm : +/- 0.10

Check value
(M pump)

Uact V : 1.700
CRT mm : 5.50
Tolerance mm : +/- 0.25
Check
tolerance mm : +/- 0.30

Stop position

Uact V : Value with
deenergised adjusting magnet
and control rod in
stop position.

CRT mm : 0.75
Tolerance mm : +/- 0.25
Check
tolerance mm : +/- 0.35

ENGINE-SPEED SENSOR
(All P and R pumps not
H and M pumps)

Test with control rod
in stop position

Engine speed min⁻¹: 60
Amplitude V : 1.4
Tolerance V : +/- 0.6
Check
tolerance V : +/- 1.20

Engine speed min⁻¹: 600
Difference
Amplitude to
Amplitude V : max.1.4

(C) INJECTION PUMP WITH POSITIONER

TEST POINT V1

Rated speed rpm : 600
Uact V : 2.800
Del. quantity
cm³/1000 strokes : 302.0
Tolerance
cm³/1000 strokes : +/- 1.0
Check tolerance
cm³/1000S. : +/- 4.0
Speed
Tolerance
cm³/1000 strokes : 8.0
Check tolerance
cm³/1000S. : 11.0

FUEL DELIVERY CHARACTERISTICS

Rated speed rpm : 950
Uact V : 2.800
Del. quantity
cm³/1000 strokes : 258.0
Tolerance
cm³/1000 strokes : +/- 3.0
Check tolerance
cm³/1000S. : +/- 6.0
Speed
Tolerance
cm³/1000 strokes : 10.0
Check tolerance
cm³/1000S. : 14.0
Rated speed rpm : 950
Uact V : 2.200
Del. quantity
cm³/1000 strokes : 183.0

Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000s. : ± 6.0

TEST POINT L1

Rated speed rpm : 250
Uact V : 1.400
Tolerance Volt : ± 0.060
Check tolerance
Volt : ± 0.060
Del. quantity
cm³/1000 strokes : 22.0
Tolerance
cm³/1000 strokes : ± 2.0
Spread
Tolerance
cm³/1000 strokes : ± 2.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 01.02.96
 Test oil : ISO 4113
 Combination No. : 0 403 244 047
 Injection pump
 Pump designation : PES4MW100/72ORS1525
 EP type number : 0 413 204 022
 Governor
 Governor design. : RQV300...1300MW132
 : -13
 Governor no. : 0 420 083 330
 Cust. part No. : 0260746302

Customer-spec. information
 Customer : MB-NFZ
 Motor : OM364LA
 Power KW : 103.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1
 Test oil inlet
 temp. °C : 40
 Tolerance °C : ± 2.0
 Overflow valve : 1 419 992 198
 Inlet press. bar : 1.5
 Test nozzle holde
 assembly : 1 688 901 101
 Opening pressure
 bar : 208.5
 Tolerance bar : ± 1.5
 Test lines : 1 680 750 089
 Outside diameter : 8.0

M16

x inside diameter : 3.0
 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
 Set equal delivery quant.
 per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0
 Tolerance bar : ± 1.0
 Prestroke mm : 4.55
 Tolerance mm : ± 0.05
 Check
 tolerance mm : ± 0.10
 Rack travel in mm : 20.00
 Tolerance mm : ± 1.00
 Firing order : 1- 3- 4- 2
 Phasing : 0-90-180-270
 Tolerance : ± 0.50
 Check
 tolerance °NW : ± 0.75

BASIC SETTING

Rated speed rpm : 1300
 Rack travel in mm : 13.30
 Tolerance mm : ± 0.05
 Del. quantity
 cm³/1000 strokes : 119.0
 Tolerance
 cm³/1000 strokes : ± 1.0
 Check tolerance
 cm³/1000S. : ± 4.0
 Spreed
 Tolerance
 cm³/1000 strokes : 5.0

Check tolerance
 cm³/1000S. : 8.0
 Rated speed rpm : 300
 Rack travel in mm : 3.90
 Tolerance mm : + 0.20
 Del. quantity
 cm³/1000 strokes : 12.0
 Tolerance
 cm³/1000 strokes : + 2.0
 Check tolerance
 cm³/1000S. : + 4.5
 Spreed
 Tolerance
 cm³/1000 strokes : 2.0
 Check tolerance
 cm³/1000S. : 4.0

(B) SETTING OF INJECTION PUMP
 WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm : 300
 guide sleeve
 travel mm : 0.91
 Tolerance mm : + 0.25
 Rated speed rpm : 1354
 guide sleeve
 travel mm : 7.15
 Tolerance mm : + 0.25
 Rated speed rpm : 1130
 guide sleeve
 travel mm : 5.40
 Tolerance mm : + 0.25
 Rated speed rpm : 610
 guide sleeve
 travel mm : 2.96
 Tolerance mm : + 0.25
 Rated speed rpm : 660
 guide sleeve
 travel mm : 3.31
 Tolerance mm : + 0.25
 Rated speed rpm : 780
 guide sleeve
 travel mm : 3.72
 Tolerance mm : + 0.25
 Rated speed rpm : 1679
 guide sleeve
 travel mm : 12.00
 Tolerance mm : + 0.25

Rated speed rpm : 1780
 guide sleeve
 travel mm : 13.50
 Tolerance mm : + 0.50

GUIDE SLEEVE POSITION

Rated speed rpm : 1445
 Rack travel in mm : 10.00
 Tolerance mm : + 2.50

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1300
 Aneroid pressure
 hPa : 1200
 Del. quantity
 cm³/1000 strokes : 119.0
 Tolerance
 cm³/1000 strokes : + 1.0
 Check tolerance
 cm³/1000S. : + 4.0
 Spreed
 Tolerance
 cm³/1000 strokes : 5.0
 Check tolerance
 cm³/1000S. : 8.0

CONTROL LEVER

control lever
 position degree : 113.0
 tolerance degree : + 4.0

RATED SPEED

rack travel mm : 12.30
 Rated speed rpm : 1345
 Tolerance 1/min : + 5
 rack travel mm : 4.00
 Rated speed rpm : 1475
 Tolerance 1/min : + 15
 rack travel mm : 0.50
 Tolerance mm : + 0.50
 Rated speed rpm : 1550

LOW IDLE

control lever
position degree : 74.0
tolerance degree : ± 4.0

Testing:

Rated speed rpm : 300
rack travel mm : 3.90
Tolerance mm : ± 0.10

Rated speed rpm : 200

CRT mm min. : > 4.50

TORQUE CONTROL

Rated speed rpm : 1300
rack travel mm : 13.30
Tolerance mm : ± 0.05

Rated speed rpm : 600
rack travel mm : 13.30
Tolerance mm : ± 0.10

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1200
rack travel mm : 13.30
Tolerance mm : ± 0.05

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 500
Tolerance mm : ± 0.10

Rated speed rpm : 500

Pressure hPa : 750
rack travel mm : 3.50
Tolerance mm : ± 0.10

Pressure hPa : 350
rack travel mm : 1.20
Tolerance mm : ± 0.10

START CUT-OUT

Rated speed rpm : > 100
Rated speed rpm : < 200

Check
speed 1/min : > 80
Check
speed 1/min : < 220

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 1200
Rated speed rpm : 600
Del. quantity
cm³/1000 strokes : 117.0
Tolerance
cm³/1000 strokes : ± 2.0
Check tolerance
cm³/1000S. : ± 5.0
Spread
Tolerance
cm³/1000 strokes : 6.0
Check tolerance
cm³/1000S. : 9.0

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 50.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 3.0

BREAKAWAY

Rack travel in mm : 12.30
Rated speed rpm : 1345
Tolerance 1/min : ± 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm³/1000 strokes : 150.0
Tolerance
cm³/1000 strokes : ± 5.0
Check tolerance
cm³/1000S. : ± 8.0

LOW IDLE

Rated speed rpm : 300
rack travel mm : 3.90

Tolerance mm : +- 0.20
Del. quantity
cm³/1000 strokes : 12.0
Tolerance
cm³/1000 strokes : +- 2.0
Check tolerance
cm³/1000S. : +- 4.5
Spreed
Tolerance
cm³/1000 strokes : 2.0
Check tolerance
cm³/1000S. : 4.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 06.02.96
Test oil : ISO 4113
Combination No. : 0 403 444 142
Injection pump
Pump designation : PES4MW100/72ORS1212
EP type number : 0 413 404 114
Governor
Governor design. : RQV300...1300MW50
: -15
Governor no. : 0 420 083 238
Cust. part No. :

Customer-spec. information
Customer : MB-NFZ
Motor : OM364LA
Power KW : 102.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet
temp. °C : 40
Tolerance °C : + 2.0
Overflow valve : 1 419 992 198
Inlet press. bar : 1.5
Test nozzle holde
assembly : 1 688 901 101
Opening pressure
bar : 208.5
Tolerance bar : + 1.5
Test lines : 1 680 750 089
Outside diameter : 8.0

M20

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0
Tolerance bar : + 1.0
Prestroke mm : 3.75
Tolerance mm : + 0.05
Check
tolerance mm : + 0.10
Rack travel in mm : 10.50
Tolerance mm : + 1.50
Firing order : 1- 3- 4- 2
Phasing : 0-90-180-270
Tolerance : + 0.50
Check
tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1300
Rack travel in mm : 13.25
Tolerance mm : + 0.05
Del. quantity
cm3/1000 strokes : 102.0
Tolerance
cm3/1000 strokes : + 1.0
Check tolerance
cm3/1000s. : + 3.0
Spreed
Tolerance
cm3/1000 strokes : 3.5

Check tolerance
 cm³/1000S. : 6.0
 Rated speed rpm : 300
 Rack travel in mm : 6.50
 Tolerance mm : ± 0.20
 Del. quantity
 cm³/1000 strokes : 12.0
 Tolerance
 cm³/1000 strokes : ± 2.0
 Check tolerance
 cm³/1000S. : ± 4.5
 Spreed
 Tolerance
 cm³/1000 strokes : 3.5
 Check tolerance
 cm³/1000S. : 5.5

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm : 300
 guide sleeve
 travel mm : 1.40
 Tolerance mm : ± 0.25
 Rated speed rpm : 1355
 guide sleeve
 travel mm : 8.65
 Tolerance mm : ± 0.25
 Rated speed rpm : 885
 guide sleeve
 travel mm : 5.01
 Tolerance mm : ± 0.25
 Rated speed rpm : 355
 guide sleeve
 travel mm : 1.96
 Tolerance mm : ± 0.25
 Rated speed rpm : 405
 guide sleeve
 travel mm : 2.33
 Tolerance mm : ± 0.25
 Rated speed rpm : 500
 guide sleeve
 travel mm : 2.92
 Tolerance mm : ± 0.25
 Rated speed rpm : 1610
 guide sleeve
 travel mm : 11.50
 Tolerance mm : ± 0.50

GUIDE SLEEVE POSITION

Rated speed rpm : 1440
 Rack travel in mm : 10.00
 Tolerance mm : ± 2.70

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1300
 Aneroid pressure
 hPa : 700
 Del. quantity
 cm³/1000 strokes : 102.0
 Tolerance
 cm³/1000 strokes : ± 1.0
 Check tolerance
 cm³/1000S. : ± 3.0
 Spreed
 Tolerance
 cm³/1000 strokes : 3.5
 Check tolerance
 cm³/1000S. : 6.0

CONTROL LEVER

control lever
 position degree : 113.0
 tolerance degree : ± 4.0

RATED SPEED

rack travel mm : 12.20
 Rated speed rpm : 1345
 Tolerance 1/min : ± 5
 rack travel mm : 4.00
 Rated speed rpm : 1465
 Tolerance 1/min : ± 15
 rack travel mm : 0.50
 Tolerance mm : ± 0.50
 Rated speed rpm : 1550

LOW IDLE

control lever
 position degree : 79.0
 tolerance degree : ± 4.0

Testing:

Rated speed rpm : 300
rack travel mm : 6.50
Tolerance mm : ± 0.10

Rated speed rpm : 200
CRT mm min. : > 8.00

TORQUE CONTROL

Rated speed rpm : 1300
rack travel mm : 13.25
Tolerance mm : ± 0.05

Rated speed rpm : 600
rack travel mm : 13.25
Tolerance mm : ± 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 700
rack travel mm : 13.25
Tolerance mm : ± 0.05

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 500
rack travel mm : 10.15
Tolerance mm : ± 0.05

Rated speed rpm : 500

Pressure hPa : 400
rack travel mm : 12.70
Tolerance mm : ± 0.10

Pressure hPa : 200
rack travel mm : 11.00
Tolerance mm : ± 0.10

START CUT-OUT

Rated speed rpm : > 100
Rated speed rpm : < 200

Check
speed 1/min : > 80
Check
speed 1/min : < 230

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 700
Rated speed rpm : 600
Del. quantity
cm³/1000 strokes : 89.0
Tolerance
cm³/1000 strokes : ± 1.5
Check tolerance
cm³/1000S. : ± 4.0
Spread
Tolerance
cm³/1000 strokes : 5.0
Check tolerance
cm³/1000S. : 7.0

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 36.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 3.0

BREAKAWAY

Rack travel in mm : 12.20
Rated speed rpm : 1345
Tolerance 1/min : ± 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm³/1000 strokes : 90.0
Tolerance
cm³/1000 strokes : ± 5.0
Check tolerance
cm³/1000S. : ± 8.0

LOW IDLE

Rated speed rpm : 300
rack travel mm : 6.50
Tolerance mm : ± 0.20
Del. quantity
cm³/1000 strokes : 12.0

Tolerance
cm³/1000 strokes : +- 2.0
Check tolerance
cm³/1000S. : +- 4.5
Spreed
Tolerance
cm³/1000 strokes : 3.5
Check tolerance
cm³/1000S. : 5.5

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 02.02.96
Test oil : ISO 4113

Combination No. : 0 403 456 118A

Injection pump
Pump designation : PES6MW100/321RS1201
EP type number : 0 413 406 190

Governor
Governor design. : RQV250...1200MW83-3
Governor no. : 0 420 083 280

Cust. part No. : 3-7530

Customer-spec. information
Customer : MAN
Motor : D 0826 LOH 12
Power KW : 140.0

TEST BENCH REQUIREMENTS

Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde
assembly : 0 681 343 009

Opening pressure
bar : 173.5
Tolerance bar : ± 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

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REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0
Tolerance bar : ± 1.0

Prestroke mm : 3.55
Tolerance mm : ± 0.05
Check
tolerance mm : ± 0.10

Rack travel in mm : 10.50
Tolerance mm : ± 1.50

Firing order : 1- 5- 3- 6- 2-
: 4

Phasing : 0-60-120-180-240
: -300
Tolerance : ± 0.50
Check
tolerance °NW : ± 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 11.00
Tolerance mm : ± 0.05

Del. quantity
cm³/1000 strokes : 110.0

Tolerance
cm³/1000 strokes : ± 1.0

Check tolerance
cm³/1000S. : ± 3.0

Spreed

Tolerance
cm³/1000 strokes : 3.5

Check tolerance
cm³/1000S. : 6.0

Rated speed rpm : 250

Rack travel in mm : 5.50
Tolerance mm : ± 0.20

Del. quantity
cm³/1000 strokes : 18.0

Tolerance
cm³/1000 strokes : ± 2.0

Check tolerance
cm³/1000S. : ± 4.5

Spreed
Tolerance
cm³/1000 strokes : 3.5

Check tolerance
cm³/1000S. : 5.5

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm : 250
guide sleeve
travel mm : 1.11
Tolerance mm : ± 0.20

Rated speed rpm : 1261
guide sleeve
travel mm : 10.59
Tolerance mm : ± 0.15

Rated speed rpm : 812
guide sleeve
travel mm : 5.87
Tolerance mm : ± 0.25

Rated speed rpm : 450
guide sleeve
travel mm : 3.22
Tolerance mm : ± 0.25

Rated speed rpm : 1460
guide sleeve
travel mm : 13.50
Tolerance mm : ± 0.50

GUIDE SLEEVE POSITION

Rated speed rpm : 1370

Rack travel in mm : 10.00

M25

Tolerance mm : ± 2.50

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 700
Aneroid pressure
hPa : 800

Del. quantity
cm³/1000 strokes : 110.0

Tolerance
cm³/1000 strokes : ± 1.0

Check tolerance
cm³/1000S. : ± 3.0

Spreed
Tolerance
cm³/1000 strokes : 3.5

Check tolerance
cm³/1000S. : 6.0

CONTROL LEVER

control lever
position degree : 299.0
tolerance degree : ± 4.0

RATED SPEED

rack travel mm : 9.85
Rated speed rpm : 1253
Tolerance 1/min : ± 8

rack travel mm : 4.00
Rated speed rpm : 1330
Tolerance 1/min : ± 15

rack travel mm : 0.50
Tolerance mm : ± 0.50
Rated speed rpm : 1400

LOW IDLE

control lever
position degree : 253.0
tolerance degree : ± 4.0

Testing:

Rated speed rpm : 250
rack travel mm : 5.50
Tolerance mm : ± 0.10

Rated speed rpm : 100

CRT mm min. : > 6.00

TORQUE CONTROL

Rated speed rpm : 700
rack travel mm : 11.00
Tolerance mm : ± 0.05

Rated speed rpm : 1200
rack travel mm : 10.85
Tolerance mm : ± 0.10

Rated speed rpm : 1000
rack travel mm : 10.90
Tolerance mm : ± 0.10

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 800
rack travel mm : 11.00
Tolerance mm : ± 0.05

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 500
rack travel mm : 10.05
Tolerance mm : ± 0.05

Rated speed rpm : 500

Pressure hPa : 150
rack travel mm : 10.35
Tolerance mm : ± 0.15

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 800
Rated speed rpm : 1200
Del. quantity
cm³/1000 strokes : 117.0
Tolerance
cm³/1000 strokes : ± 1.5
Check tolerance
cm³/1000S. : ± 4.0
Spreed
Tolerance
cm³/1000 strokes : 5.0
Check tolerance
cm³/1000S. : 7.0

Aneroid pressure
hPa : 800
Rated speed rpm : 1000
Del. quantity
cm³/1000 strokes : 118.0
Tolerance
cm³/1000 strokes : ± 1.5
Check tolerance
cm³/1000S. : ± 4.0

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 75.0
Tolerance
cm³/1000 strokes : ± 1.0
Check tolerance
cm³/1000S. : ± 3.0

BREAKAWAY

Rack travel in mm : 9.85
Rated speed rpm : 1253
Tolerance 1/min : ± 8

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm³/1000 strokes : 70.0
Tolerance
cm³/1000 strokes : ± 10.0
Check tolerance
cm³/1000S. : ± 13.0

LOW IDLE

Rated speed rpm : 250
rack travel mm : 5.50
Tolerance mm : ± 0.20
Del. quantity
cm³/1000 strokes : 18.0
Tolerance
cm³/1000 strokes : ± 2.0
Check tolerance
cm³/1000S. : ± 4.5
Spreed
Tolerance
cm³/1000 strokes : 3.5
Check tolerance
cm³/1000S. : 5.5

End of test specification sheet



BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 05.02.96
Test oil : ISO 4113
Combination No. : 0 403 476 120
Injection pump
Pump designation : PES6MW100/72ORS1131
: -1
EP type number : 0 413 406 165
Governor
Governor design. : RSV350...750MWOA336
: -6
Governor no. : 0 420 085 198
Cust. part No. :

Customer-spec. information
Customer : MB-NFZ
Motor : OM 366 LA
Power KW : 87.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0
Overflow valve : 1 419 992 198
Inlet press. bar : 1.5
Test nozzle holde
assembly : 1 688 901 101
Opening pressure
bar : 208.5
Tolerance bar : ± 1.5
Test lines : 1 680 750 089

Outside diameter : 8.0
x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0
Tolerance bar : ± 1.0
Prestroke mm : 3.65
Tolerance mm : ± 0.05
Check
tolerance mm : ± 0.10
Rack travel in mm : 10.50
Tolerance mm : ± 1.50
Firing order : 1- 5- 3- 6- 2-
: 4
Phasing : 0-60-120-180-240
: -300
Tolerance : ± 0.50
Check
tolerance °NW : ± 0.75

BASIC SETTING

Rated speed rpm : 700
Rack travel in mm : 12.55
Tolerance mm : ± 0.05
Del. quantity
cm3/1000 strokes : 88.0
Tolerance
cm3/1000 strokes : ± 1.0
Check tolerance
cm3/1000S. : ± 3.0
Speed

Tolerance
 cm³/1000 strokes : 3.5
 Check tolerance
 cm³/1000S. : 6.0
 Rated speed rpm : 350
 Rack travel in mm : 5.80
 Tolerance mm : + 0.70
 Del. quantity
 cm³/1000 strokes : 11.0
 Tolerance
 cm³/1000 strokes : + 2.0
 Check tolerance
 cm³/1000S. : + 4.5
 Spreed
 Tolerance
 cm³/1000 strokes : 3.5
 Check tolerance
 cm³/1000S. : 5.5

(B) SETTING OF INJECTION PUMP WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800
 Rack travel in mm : 0.65
 Tolerance mm : + 0.35
 governor spring
 pre-tension
 click setting x : 2.80

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 700
 Aneroid pressure
 hPa : -
 Del. quantity
 cm³/1000 strokes : 88.0
 Tolerance
 cm³/1000 strokes : + 1.0
 Check tolerance
 cm³/1000S. : + 3.0
 Spreed
 Tolerance
 cm³/1000 strokes : 3.5
 Check tolerance
 cm³/1000S. : 6.0

CONTROL LEVER

NO1

control lever
 position degree : 77.0
 tolerance degree : + 4.0

RATED SPEED

rack travel mm : 1.00
 Tolerance mm : + 0.70
 Rated speed rpm : 850

ASSEMBLY GOVERNOR SETTING

Rated speed rpm : 750
 rack travel mm : 11.50

Rated speed rpm : 779
 Tolerance 1/min : + 4
 rack travel mm : 4.00

Rated speed rpm : 751
 rack travel mm : 11.50

Rated speed rpm : 780
 Tolerance 1/min : + 4
 rack travel mm : 4.00

Rated speed rpm : 752
 rack travel mm : 11.50

Rated speed rpm : 781
 Tolerance 1/min : + 4
 rack travel mm : 4.00

Rated speed rpm : 753
 rack travel mm : 11.50

Rated speed rpm : 782
 Tolerance 1/min : + 4
 rack travel mm : 4.00

Rated speed rpm : 754
 rack travel mm : 11.50

Rated speed rpm : 783
 Tolerance 1/min : + 4
 rack travel mm : 4.00

Rated speed rpm : 755
 rack travel mm : 11.50

Rated speed rpm : 784
 Tolerance 1/min : + 4
 rack travel mm : 4.00

LOW IDLE

control lever
position degree : 67.0
tolerance degree : +- 2.0

Testing:

Rated speed rpm : 350
rack travel mm : 5.80
Tolerance mm : +- 0.50

rack travel mm : 2.00
Rated speed rpm : 400
Tolerance 1/min : +- 30

Rated speed rpm : 100

CRT mm min. : > 19.00

TORQUE CONTROL

Rated speed rpm : 700
rack travel mm : 12.55
Tolerance mm : +- 0.05

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm3/1000 strokes : 93.0
Tolerance
cm3/1000 strokes : +- 5.0
Check tolerance
cm3/1000S. : +- 8.0

LOW IDLE

Rated speed rpm : 350
rack travel mm : 5.80
Tolerance mm : +- 0.70
Del. quantity
cm3/1000 strokes : 11.0
Tolerance
cm3/1000 strokes : +- 2.0
Check tolerance
cm3/1000S. : +- 4.5
Spread
Tolerance
cm3/1000 strokes : 3.5

NO2

Check tolerance
cm3/1000S. : 5.5

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 20.11.95
Test oil : ISO 4113
Combination No. : 0 403 466 166
Injection pump
Pump designation : PES6MW100/120RS1241
EP type number : 0 413 406 240
Governor
Governor design. : RSV450...1250MWOA384
Governor no. : 0 420 085 267

Cust. part No. : 3929163

Customer-spec. information
Customer : CDC
Motor : 6 CT
Power KW : 160.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2
Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0
Overflow valve : 1 417 413 047
Inlet press. bar : 2.0
Tolerance bar : ± 0.1
Test nozzle holde
assembly : 1 688 901 101
Opening pressure
bar : 208.5
Tolerance bar : ± 1.5
Test lines : 1 680 750 014
Outside diameter : 6.0

N03

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0
Tolerance bar : ± 1.0
Firing order : 1- 5- 3- 6- 2-
: 4
Phasing : 0-60-120-180-240
: -300
Tolerance : ± 0.50
Check
tolerance °NW : ± 0.75

Start of delivery blocking

°NW after s.o.d. : 8.25
Tolerance : ± 0.50
Check
tolerance °NW : ± 0.75
Barrel no. : 1

Beginning of delivery differende

and maximum rack
travel : 15.00
Difference ° CS : 1.50

BASIC SETTING

Rated speed rpm : 1250
Rack travel in mm : 12.25
Tolerance mm : ± 0.05
Del. quantity
cm³/1000 strokes : 142.5

Tolerance
cm³/1000 strokes : ± 1.0

Check tolerance
cm³/1000S. : ± 4.0

Spread
Tolerance
cm³/1000 strokes : 4.0

Check tolerance
cm³/1000S. : 7.5

Del. quantity
cm³/1000 strokes : 14.0

Tolerance
cm³/1000 strokes : ± 2.0

Check tolerance
cm³/1000S. : ± 4.5

Spread
Tolerance
cm³/1000 strokes : 3.5

Check tolerance
cm³/1000S. : 5.5

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800

Rack travel in mm : 0.50

Tolerance mm : ± 0.20

governor spring
pre-tension
click setting x : 3.25

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1250

Aneroid pressure
hPa : 1200

Del. quantity
cm³/1000 strokes : 142.5

Tolerance
cm³/1000 strokes : ± 1.0

Check tolerance
cm³/1000S. : ± 4.0

Spread
Tolerance
cm³/1000 strokes : 4.0

Check tolerance
cm³/1000S. : 7.5

CONTROL LEVER

control lever
position degree : 92.5
tolerance degree : ± 4.0

RATED SPEED

rack travel mm : 11.20
Rated speed rpm : 1315
Tolerance 1/min : ± 5

rack travel mm : 6.60
Rated speed rpm : 1390
Tolerance 1/min : ± 5

rack travel mm : 1.00
Tolerance mm : ± 0.70
Rated speed rpm : 1495

LOW IDLE

control lever
position degree : 74.0
tolerance degree : ± 4.0

Setting point w/out bumper spring

Rated speed rpm : 450
rack travel mm : 4.60

Testing:

Rated speed rpm : 450
rack travel mm : 5.10
Tolerance mm : ± 0.10

Rated speed rpm : 100

CRT mm min. : > 19.00

TORQUE CONTROL

Rated speed rpm : 1250
rack travel mm : 12.25
Tolerance mm : ± 0.05

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1200

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 500
rack travel mm : 10.20
Tolerance mm : \pm 0.20

Rated speed rpm : 500

Pressure hPa : 800
rack travel mm : 11.50
Tolerance mm : \pm 0.20

Pressure hPa : 600
rack travel mm : 10.60
Tolerance mm : \pm 0.25

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 114.5
Tolerance
cm³/1000 strokes : \pm 1.0
Check tolerance
cm³/1000S. : \pm 3.0

BREAKAWAY

Rack travel in mm : 11.20
Rated speed rpm : 1315
Tolerance 1/min : \pm 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.50
Tolerance mm : \pm 1.00
Del. quantity
cm³/1000 strokes : 171.5
Tolerance
cm³/1000 strokes : \pm 10.0
Check tolerance
cm³/1000S. : \pm 13.0

LOW IDLE

Del. quantity
cm³/1000 strokes : 14.0
Tolerance
cm³/1000 strokes : \pm 2.0
Check tolerance
cm³/1000S. : \pm 4.5
Speed
Tolerance
cm³/1000 strokes : 3.5
Check tolerance
cm³/1000S. : 5.5

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 06.02.96
Test oil : ISO 4113
Combination No. : 0 400 863 021
Injection pump
Pump designation : PES3A95D410/3RS2905
EP type number : 0 410 893 996
Governor
Governor design. : RSV325...900A1C859L
Governor no. : 0 420 232 622
Cust. part No. : 0423 1593 KY

Customer-spec. information
Customer : KHD-DMI
Motor : F3L912/913_NEU
Power KW : 40.5

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet
temp. °C : 40
Tolerance °C : +- 2.0
Overflow valve : 1 419 992 198
Inlet press. bar : 1.5
Test nozzle holde
assembly : 0 681 343 009
Opening pressure
bar : 173.5
Tolerance bar : +- 1.5
Test lines : 1 680 750 014
Outside diameter : 6.0

N06

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : +- 1.0

Prestroke mm : 3.00
Tolerance mm : +- 0.05
Check
tolerance mm : +- 0.10

Rack travel in mm : 10.50
Tolerance mm : +- 1.50

Firing order : 1- 3- 2

Phasing : 0-120-240

BASIC SETTING

Del. quantity
cm3/1000 strokes : 80.0

Tolerance
cm3/1000 strokes : +- 1.0

Check tolerance
cm3/1000S. : +- 3.0

Speed
Tolerance
cm3/1000 strokes : 3.5

Check tolerance
cm3/1000S. : 8.0

Rated speed rpm : 325

Rack travel in mm : 9.50
Del. quantity
cm3/1000 strokes : 21.0
Tolerance
cm3/1000 strokes : +- 2.0

Check tolerance
cm³/1000S. : + 4.5
Spreed
Tolerance
cm³/1000 strokes : 5.5
Check tolerance
cm³/1000S. : 9.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800
Rack travel in mm : 0.50
Tolerance mm : + 0.20
governor spring
pre-tension
click setting x : 2.00

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 890
Aneroid pressure
hPa : -
Del. quantity
cm³/1000 strokes : 80.0
Tolerance
cm³/1000 strokes : + 1.0
Check tolerance
cm³/1000S. : + 3.0
Spreed
Tolerance
cm³/1000 strokes : 3.5
Check tolerance
cm³/1000S. : 8.0

CONTROL LEVER

control lever
position degree : 89.0
tolerance degree : + 4.0

RATED SPEED

rack travel mm : 10.80
Rated speed rpm : 898
Tolerance 1/min : + 5
rack travel mm : 4.00
Rated speed rpm : 915
Tolerance 1/min : + 10

NO7

rack travel mm : 0.85
Tolerance mm : + 0.55
Rated speed rpm : 1090

rack travel mm : 4.00
Rated speed rpm : 940

LOW IDLE

control lever
position degree : 67.0
tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 325
rack travel mm : 9.00

Testing:

Rated speed rpm : 325
rack travel mm : 9.50
Tolerance mm : + 0.10

rack travel mm : 2.00
Rated speed rpm : 430
Tolerance 1/min : + 30

Rated speed rpm : 100

CRT mm min. : > 19.50

BREAKAWAY

Rack travel in mm : 10.80
Rated speed rpm : 898
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.25
Tolerance mm : + 0.75
Del. quantity
cm³/1000 strokes : 123.0
Tolerance
cm³/1000 strokes : + 7.5

Check tolerance
cm³/1000S. : +- 10.0

LOW IDLE

Rated speed rpm : 325
rack travel mm : 9.50
Del. quantity
cm³/1000 strokes : 21.0
Tolerance
cm³/1000 strokes : +- 2.0
Check tolerance
cm³/1000S. : +- 4.5
Spreed
Tolerance
cm³/1000 strokes : 5.5
Check tolerance
cm³/1000S. : 9.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 06.02.96
Test oil : ISO 4113
Combination No. : 0 400 866 222
Injection pump
Pump designation : PES6A95D410/3RS2907
EP type number : 0 410 896 884
Governor
Governor design. : RSV325...1250A5C858L
Governor no. : 0 420 232 621
Cust. part No. : 0423 1601 KY

Customer-spec. information
Customer : KHD-DMI
Motor : F6L912/913_NEU
Power KW : 81.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0
Overflow valve : 1 419 992 198
Inlet press. bar : 1.5
Test nozzle holde
assembly : 0 681 343 009
Opening pressure
bar : 173.5
Tolerance bar : ± 1.5
Test lines : 1 680 750 014
Outside diameter : 6.0

NO9

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0
Prestroke mm : 3.00
Tolerance mm : ± 0.05
Check
tolerance mm : ± 0.10
Rack travel in mm : 10.50
Tolerance mm : ± 1.50
Firing order : 1- 5- 3- 6- 2-
: 4
Phasing : 0-60-120-180-240
: -300

BASIC SETTING

Rated speed rpm : 1250
Rack travel in mm : 11.35
Tolerance mm : ± 0.05
Del. quantity
cm3/1000 strokes : 76.0
Tolerance
cm3/1000 strokes : ± 1.0
Check tolerance
cm3/1000S. : ± 3.0
Speed
Tolerance
cm3/1000 strokes : 3.5
Check tolerance
cm3/1000S. : 8.0

Rated speed rpm : 325

Rack travel in mm : 9.50
Tolerance mm : + 0.10

Del. quantity
cm³/1000 strokes : 21.0
Tolerance
cm³/1000 strokes : + 2.0
Check tolerance
cm³/1000S. : + 4.5

Spreed
Tolerance
cm³/1000 strokes : 5.5
Check tolerance
cm³/1000S. : 9.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800

Rack travel in mm : 0.50
Tolerance mm : + 0.20

governor spring
pre-tension
click setting x : 2.75

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1250
Aneroid pressure
hPa : -

Del. quantity
cm³/1000 strokes : 76.0
Tolerance
cm³/1000 strokes : + 1.0
Check tolerance
cm³/1000S. : + 3.0

Spreed
Tolerance
cm³/1000 strokes : 3.5
Check tolerance
cm³/1000S. : 8.0

CONTROL LEVER

control lever
position degree : 100.0
tolerance degree : + 4.0

N10

RATED SPEED

rack travel mm : 10.35
Rated speed rpm : 1290
Tolerance 1/min : + 5

rack travel mm : 4.00
Rated speed rpm : 1330
Tolerance 1/min : + 15

rack travel mm : 0.85
Tolerance mm : + 0.55
Rated speed rpm : 1510

rack travel mm : 4.00
Rated speed rpm : 1360

LOW IDLE

control lever
position degree : 67.0
tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 325
rack travel mm : 9.00

Testing:

Rated speed rpm : 325
rack travel mm : 9.50
Tolerance mm : + 0.10

rack travel mm : 2.00
Rated speed rpm : 494
Tolerance 1/min : + 30

Rated speed rpm : 100

CRT mm min. : > 19.50

TORQUE CONTROL

Rated speed rpm : 1250
rack travel mm : 11.35
Tolerance mm : + 0.05

Rated speed rpm : 750
rack travel mm : 11.35
Tolerance mm : + 0.10

BREAKAWAY

Rack travel in mm : 10.35
Rated speed rpm : 1290
Tolerance 1/min : \pm 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.25
Tolerance mm : \pm 0.75
Del. quantity
cm³/1000 strokes : 123.0
Tolerance
cm³/1000 strokes : \pm 7.5
Check tolerance
cm³/1000s. : \pm 10.0

LOW IDLE

Rated speed rpm : 325
rack travel mm : 9.50
Tolerance mm : \pm 0.10
Del. quantity
cm³/1000 strokes : 21.0
Tolerance
cm³/1000 strokes : \pm 2.0
Check tolerance
cm³/1000s. : \pm 4.5
Spreed
Tolerance
cm³/1000 strokes : 5.5
Check tolerance
cm³/1000s. : 9.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 13.02.96
Test oil : ISO 4113
Combination No. : D 400 866 223
Injection pump
Pump designation : PES6A95D410/3RS2907
EP type number : O 410 896 884
Governor
Governor design. : RSV325...900A1C859L
Governor no. : O 420 232 622

Cust. part No. : 0423 1602 KY

Customer-spec. information
Customer : KHD-DMI
Motor : F6L912/913_NEU
Power KW : 81.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet
temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde
assembly : O 681 343 009

Opening pressure
bar : 173.5
Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : +- 1.0

Prestroke mm : 3.00
Tolerance mm : +- 0.05
Check
tolerance mm : +- 0.10

Rack travel in mm : 10.50
Tolerance mm : +- 1.50

Firing order : 1- 5- 3- 6- 2-
: 4

Phasing : 0-60-120-180-240
: -300

BASIC SETTING

Rated speed rpm : 890

Rack travel in mm : 11.80
Tolerance mm : +- 0.05

Del. quantity
cm3/1000 strokes : 80.0

Tolerance
cm3/1000 strokes : +- 1.0

Check tolerance
cm3/1000S. : +- 3.0

Spreed
Tolerance
cm3/1000 strokes : 3.5

Check tolerance
cm3/1000S. : 8.0

Rated speed rpm : 325

Rack travel in mm : 7.90
Tolerance mm : + 0.10

Del. quantity
cm³/1000 strokes : 11.5
Tolerance
cm³/1000 strokes : + 2.0

Check tolerance
cm³/1000S. : + 4.5

Spreed
Tolerance
cm³/1000 strokes : 5.5
Check tolerance
cm³/1000S. : 9.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800

Rack travel in mm : 0.50
Tolerance mm : + 0.20

governor spring
pre-tension
click setting x : 2.50

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 890
Aneroid pressure
hPa : -

Del. quantity
cm³/1000 strokes : 80.0
Tolerance
cm³/1000 strokes : + 1.0

Check tolerance
cm³/1000S. : + 3.0

Spreed
Tolerance
cm³/1000 strokes : 3.5
Check tolerance
cm³/1000S. : 8.0

CONTROL LEVER

control lever
position degree : 90.0
tolerance degree : + 4.0

RATED SPEED

rack travel mm : 10.80
Rated speed rpm : 898
Tolerance 1/min : + 5

rack travel mm : 4.00
Rated speed rpm : 921
Tolerance 1/min : + 10

rack travel mm : 0.85
Tolerance mm : + 0.55
Rated speed rpm : 1090

rack travel mm : 4.00
Rated speed rpm : 938

LOW IDLE

control lever
position degree : 68.0
tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 325
rack travel mm : 7.40

Testing:

Rated speed rpm : 325
rack travel mm : 7.90

rack travel mm : 2.00
Rated speed rpm : 413
Tolerance 1/min : + 30

Rated speed rpm : 100

CRT mm min. : > 19.50

TORQUE CONTROL

Rated speed rpm : 890
rack travel mm : 11.80
Tolerance mm : + 0.05

BREAKAWAY

Rack travel in mm : 10.80
Rated speed rpm : 898
Tolerance 1/min : \pm 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.25
Tolerance mm : \pm 0.75
Del. quantity
cm³/1000 strokes : 123.0
Tolerance
cm³/1000 strokes : \pm 7.5
Check tolerance
cm³/1000S. : \pm 10.0

LOW IDLE

Rated speed rpm : 325
rack travel mm : 7.90
Tolerance mm : \pm 0.10
Del. quantity
cm³/1000 strokes : 11.5
Tolerance
cm³/1000 strokes : \pm 2.0
Check tolerance
cm³/1000S. : \pm 4.5
Spreed
Tolerance
cm³/1000 strokes : 5.5
Check tolerance
cm³/1000S. : 9.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 14.02.96
Test oil : ISO 4113
Combination No. : 0 400 866 224
Injection pump
Pump designation : PES6A95D410/3RS2907
EP type number : 0 410 896 884
Governor
Governor design. : RSV325...1250A5C860L
Governor no. : 0 420 232 623

Cust. part No. : 0423 1812 KY

Customer-spec. information
Customer : KHD-DMI
Motor : F6L912/913_NEU
Power KW : 89.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde
assembly : 0 681 343 009

Opening pressure
bar : 173.5
Tolerance bar : ± 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : ± 1.0

Prestroke mm : 3.00
Tolerance mm : ± 0.05
Check
tolerance mm : ± 0.10

Rack travel in mm : 10.50
Tolerance mm : ± 1.50

Firing order : 1- 5- 3- 6- 2-
: 4

Phasing : 0-60-120-180-240
: -300

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 11.35
Tolerance mm : ± 0.05

Del. quantity
cm³/1000 strokes : 76.0

Tolerance
cm³/1000 strokes : ± 1.0

Check tolerance
cm³/1000S. : ± 3.0

Speed
Tolerance
cm³/1000 strokes : 3.5

Check tolerance
cm³/1000S. : 8.0

Rated speed rpm : 325

Rack travel in mm : 8.20
Tolerance mm : +- 0.10

Del. quantity
cm3/1000 strokes : 11.5
Tolerance
cm3/1000 strokes : +- 2.0

Check tolerance
cm3/1000S. : +- 4.5

Spread
Tolerance
cm3/1000 strokes : 5.5
Check tolerance
cm3/1000S. : 9.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800

Rack travel in mm : 0.50
Tolerance mm : +- 0.20

governor spring
pre-tension
click setting x : 3.00

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1250
Aneroid pressure
hPa : -

Del. quantity
cm3/1000 strokes : 76.0
Tolerance
cm3/1000 strokes : +- 1.0

Check tolerance
cm3/1000S. : +- 3.0

Spread
Tolerance
cm3/1000 strokes : 3.5
Check tolerance
cm3/1000S. : 8.0

CONTROL LEVER

control lever
position degree : 102.0
tolerance degree : +- 4.0

RATED SPEED

rack travel mm : 10.35
Rated speed rpm : 1295
Tolerance 1/min : +- 5

rack travel mm : 4.00
Rated speed rpm : 1339
Tolerance 1/min : +- 15

rack travel mm : 0.85
Tolerance mm : +- 0.55
Rated speed rpm : 1510

rack travel mm : 4.00
Rated speed rpm : 1360

LOW IDLE

control lever
position degree : 68.0
tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 325
rack travel mm : 7.70

Testing:

Rated speed rpm : 325
rack travel mm : 8.20
Tolerance mm : +- 0.10

rack travel mm : 2.00
Rated speed rpm : 473
Tolerance 1/min : +- 30

Rated speed rpm : 100

CRT mm min. : > 19.50

TORQUE CONTROL

Rated speed rpm : 1250
rack travel mm : 11.35
Tolerance mm : +- 0.05

BREAKAWAY

Rack travel in mm : 10.35
Rated speed rpm : 1295
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.25
Tolerance mm : +- 0.75
Del. quantity
cm³/1000 strokes : 130.0
Tolerance
cm³/1000 strokes : +- 7.5
Check tolerance
cm³/1000S. : +- 10.0

LOW IDLE

Rated speed rpm : 325
rack travel mm : 8.20
Tolerance mm : +- 0.10
Del. quantity
cm³/1000 strokes : 11.5
Tolerance
cm³/1000 strokes : +- 2.0
Check tolerance
cm³/1000S. : +- 4.5
Spreed
Tolerance
cm³/1000 strokes : 5.5
Check tolerance
cm³/1000S. : 9.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 14.02.96
Test oil : ISO 4113
Combination No. : 0 400 866 225
Injection pump
Pump designation : PES6A95D410/3RS2907
EP type number : 0 410 896 884
Governor
Governor design. : RSV325...1250A5C861L
Governor no. : 0 420 232 624
Cust. part No. : 0423 1813 KY

Customer-spec. information
Customer : KHD-DMI
Motor : F6L912/913_NEU
Power KW : 89.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1
Test oil inlet temp. °C : 40
Tolerance °C : + 2.0
Overflow valve : 1 419 992 198
Inlet press. bar : 1.5
Test nozzle holder assembly : 0 681 343 009
Opening pressure bar : 173.5
Tolerance bar : + 1.5
Test lines : 1 680 750 014
Outside diameter : 6.0

N18

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0
Tolerance bar : + 1.0
Prestroke mm : 3.00
Tolerance mm : + 0.05
Check tolerance mm : + 0.10
Rack travel in mm : 10.50
Tolerance mm : + 1.50
Firing order : 1- 5- 3- 6- 2-
: 4
Phasing : 0-60-120-180-240
: -300

BASIC SETTING

Rated speed rpm : 1250
Rack travel in mm : 11.35
Tolerance mm : + 0.05
Del. quantity cm3/1000 strokes : 76.0
Tolerance cm3/1000 strokes : + 1.0
Check tolerance cm3/1000S. : + 3.0
Speed Tolerance cm3/1000 strokes : 3.5
Check tolerance cm3/1000S. : 8.0

Rated speed rpm : 325

Rack travel in mm : 8.20
Tolerance mm : + 0.10

Del. quantity
cm³/1000 strokes : 11.5
Tolerance
cm³/1000 strokes : + 2.0
Check tolerance
cm³/1000S. : + 4.5

Spreed
Tolerance
cm³/1000 strokes : 5.5
Check tolerance
cm³/1000S. : 9.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800

Rack travel in mm : 0.50
Tolerance mm : + 0.20

governor spring
pre-tension
click setting x : 3.00

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1250
Aneroid pressure
hPa : -

Del. quantity
cm³/1000 strokes : 76.0
Tolerance
cm³/1000 strokes : + 1.0
Check tolerance
cm³/1000S. : + 3.0

Spreed
Tolerance
cm³/1000 strokes : 3.5
Check tolerance
cm³/1000S. : 8.0

CONTROL LEVER

control lever
position degree : 102.0
tolerance degree : + 4.0

RATED SPEED

rack travel mm : 10.35
Rated speed rpm : 1295
Tolerance 1/min : + 5

rack travel mm : 4.00
Rated speed rpm : 1339
Tolerance 1/min : + 15

rack travel mm : 0.85
Tolerance mm : + 0.55
Rated speed rpm : 1510

rack travel mm : 4.00
Rated speed rpm : 1360

LOW IDLE

control lever
position degree : 68.0
tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 325
rack travel mm : 7.70

Testing:

Rated speed rpm : 325
rack travel mm : 8.20
Tolerance mm : + 0.10

rack travel mm : 2.00
Rated speed rpm : 473
Tolerance 1/min : + 30

Rated speed rpm : 100

CRT mm min. : > 19.50

TORQUE CONTROL

Rated speed rpm : 1250
rack travel mm : 11.35
Tolerance mm : + 0.05

BREAKAWAY

Rack travel in mm : 10.35
Rated speed rpm : 1295
Tolerance 1/min : \pm 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.25
Tolerance mm : \pm 0.75
Del. quantity
cm³/1000 strokes : 130.0
Tolerance
cm³/1000 strokes : \pm 7.5
Check tolerance
cm³/1000s. : \pm 10.0

LOW IDLE

Rated speed rpm : 325
rack travel mm : 8.20
Tolerance mm : \pm 0.10
Del. quantity
cm³/1000 strokes : 11.5
Tolerance
cm³/1000 strokes : \pm 2.0
Check tolerance
cm³/1000s. : \pm 4.5
Spreed
Tolerance
cm³/1000 strokes : 5.5
Check tolerance
cm³/1000s. : 9.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 31.01.96
Test oil : ISO 4113

Combination No. : 0 402 076 781

Injection pump
Pump designation : PES6P120A720RS3352
EP type number : 0 412 026 780

Governor
Governor design. : RSV650...1100P2A599
 : -2
Governor no. : 0 421 833 491

Cust. part No. : RE62646

Customer-spec. information
Customer : DEERE
Motor : 6081HZ003
Power KW : 170.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet
temp. °C : 40
Tolerance °C : ± 2.0

Overflow valve : 1 457 413 010

Inlet press. bar : 2.0

Test nozzle holde
assembly : 1 688 901 101

Opening pressure
bar : 208.5
Tolerance bar : ± 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

N21

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0
Tolerance bar : ± 1.0

Prestroke mm : 3.60
Tolerance mm : ± 0.05
Check
tolerance mm : ± 0.10

Rack travel in mm : 10.50
Tolerance mm : ± 1.50

Firing order : 1- 5- 3- 6- 2-
 : 4

Phasing : 0-60-120-180-240
 : -300
Tolerance : ± 0.50
Check
tolerance °NW : ± 0.75

Start of delivery mark

°NW after s.o.d. : 9.25
Tolerance : ± 0.50
Check
tolerance °NW : ± 0.75

Barrel no. : 1

Beginning of delivery differende

and maximum rack
travel : 14.00
Difference ° CS : 2.50

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 11.15
Tolerance mm : +- 0.05

Del. quantity
cm³/1000 strokes : 126.0

Tolerance
cm³/1000 strokes : +- 1.0

Check tolerance
cm³/1000S. : +- 3.0

Spread
Tolerance
cm³/1000 strokes : 4.0

Check tolerance
cm³/1000S. : 6.5

Del. quantity
cm³/1000 strokes : 22.5
Tolerance
cm³/1000 strokes : +- 3.0
Check tolerance
cm³/1000S. : +- 5.0
Spread
Tolerance
cm³/1000 strokes : 6.0
Check tolerance
cm³/1000S. : 8.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

GUIDE SLEEVE POSITION

Rated speed rpm : 800

Rack travel in mm : 0.50
Tolerance mm : +- 0.20

governor spring
pre-tension
click setting x : 3.50

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1100
Aneroid pressure
hPa : 1100
Del. quantity
cm³/1000 strokes : 126.0

Tolerance
cm³/1000 strokes : +- 1.0
Check tolerance
cm³/1000S. : +- 3.0
Spread
Tolerance
cm³/1000 strokes : 4.0
Check tolerance
cm³/1000S. : 6.5

CONTROL LEVER

control lever
position degree : 97.0
tolerance degree : +- 4.0

RATED SPEED

rack travel mm : 10.10
Rated speed rpm : 1160
Tolerance 1/min : +- 5

rack travel mm : 4.00
Rated speed rpm : 1215
Tolerance 1/min : +- 5

rack travel mm : 0.85
Tolerance mm : +- 0.55
Rated speed rpm : 1300

rack travel mm : 4.00
Rated speed rpm : 1215

LOW IDLE

control lever
position degree : 80.0
tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 650
rack travel mm : 4.65

Testing:

Rated speed rpm : 650
rack travel mm : 5.15
Tolerance mm : +- 0.10

Rated speed rpm : 100
CRT mm min. : > 19.00

TORQUE CONTROL

Rated speed rpm : 1100
rack travel mm : 11.15
Tolerance mm : +- 0.05

Rated speed rpm : 700
rack travel mm : 12.25
Tolerance mm : +- 0.10

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1100

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 500
rack travel mm : 10.15
Tolerance mm : +- 0.20

Rated speed rpm : 500

Pressure hPa : 670
rack travel mm : 11.70
Tolerance mm : +- 0.20

Pressure hPa : 390
rack travel mm : 10.70
Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 1100
Rated speed rpm : 700
Del. quantity
cm3/1000 strokes : 153.5
Tolerance
cm3/1000 strokes : +- 2.0
Check tolerance
cm3/1000S. : +- 4.0

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm3/1000 strokes : 103.0

Tolerance
cm3/1000 strokes : +- 2.0
Check tolerance
cm3/1000S. : +- 4.0

BREAKAWAY

Rack travel in mm : 10.10
Rated speed rpm : 1160
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.50
Tolerance mm : +- 0.50
Del. quantity
cm3/1000 strokes : 105.0
Tolerance
cm3/1000 strokes : +- 20.0
Check tolerance
cm3/1000S. : +- 25.0

LOW IDLE

Del. quantity
cm3/1000 strokes : 22.5
Tolerance
cm3/1000 strokes : +- 3.0
Check tolerance
cm3/1000S. : +- 5.0
Speed
Tolerance
cm3/1000 strokes : 6.0
Check tolerance
cm3/1000S. : 8.0

End of test specification sheet

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 12.02.96
Test oil : ISO 4113

Combination No. : 0 402 736 845

Injection pump
Pump designation : PES6P120A120RS7286
EP type number : 0 412 726 894

Governor
Governor design. : RQV350...1100PA964
 : -20K
Governor no. : 0 421 815 352

Cust. part No. : 3922425

Customer-spec. information
Customer : CDC
Motor : 6CTA-A
Power KW : 224.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet
temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 086

Inlet press. bar : 2.0
Tolerance bar : + 0.1

Test nozzle holde
assembly : 1 688 901 103

Opening pressure
bar : 208.5
Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0
x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES
Set equal delivery quant.
per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0
Tolerance bar : + 1.0

Firing order : 1- 5- 3- 6- 2-
 : 4

Phasing : 0-60-120-180-240
 : -300
Tolerance : + 0.50
Check
tolerance °NW : + 0.75

Start of delivery blocking

°NW after s.o.d. : 6.25
Tolerance : + 0.50
Check
tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 15.25
Tolerance mm : + 0.05

Del. quantity
cm3/1000 strokes : 243.5

Tolerance
cm3/1000 strokes : + 1.0

Check tolerance
cm3/1000S. : + 4.0

Speed
Tolerance
cm³/1000 strokes : 5.0

Check tolerance
cm³/1000S. : 9.0

(B) SETTING OF INJECTION PUMP
WITH GOVERNOR

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1100
Aneroid pressure
hPa : 1200
Del. quantity
cm³/1000 strokes : 243.5
Tolerance
cm³/1000 strokes : + 1.0
Check tolerance
cm³/1000S. : + 4.0
Speed
Tolerance
cm³/1000 strokes : 5.0
Check tolerance
cm³/1000S. : 9.0

CONTROL LEVER

control lever
position degree : 119.0
tolerance degree : + 6.0

RATED SPEED

rack travel mm : 13.60
Rated speed rpm : 1255
Tolerance 1/min : + 15

rack travel mm : 4.00
Rated speed rpm : 1400
Tolerance 1/min : + 5

rack travel mm : 0.50
Tolerance mm : + 0.50
Rated speed rpm : 1500

LOW IDLE

control lever
position degree : 71.0
tolerance degree : + 6.0

Testing:

Rated speed rpm : 350
rack travel mm : 6.60
Tolerance mm : + 0.20

Rated speed rpm : 275

CRT mm min. : > 7.80

Rated speed rpm : 425

TORQUE CONTROL

Rated speed rpm : 1100
rack travel mm : 15.25
Tolerance mm : + 0.05

Rated speed rpm : 650
rack travel mm : 13.40
Tolerance mm : + 0.20

Rated speed rpm : 1200
rack travel mm : 14.70
Tolerance mm : + 0.10

Rated speed rpm : 750
rack travel mm : 13.70
Tolerance mm : + 0.20

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 1100
Pressure hPa : 1200
rack travel mm : 15.25
Tolerance mm : + 0.05

MEASUREMENT

Pressure hPa : -
Rated speed rpm : 1100
rack travel mm : 9.20
Tolerance mm : + 0.20

Rated speed rpm : 1100

Pressure hPa : 715
rack travel mm : 13.50
Tolerance mm : + 0.20

Pressure hPa : 335
rack travel mm : 10.60
Tolerance mm : + 0.05

START CUT-OUT

Rated speed rpm : > 100
Rated speed rpm : < 290

Check
speed 1/min : > 80
Check
speed 1/min : < 300

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 1200
Rated speed rpm : 750
Del. quantity
cm³/1000 strokes : 211.5
Tolerance
cm³/1000 strokes : ± 3.0
Check tolerance
cm³/1000S. : ± 6.0
Spreed
Tolerance
cm³/1000 strokes : 8.0
Check tolerance
cm³/1000S. : 12.0

Aneroid pressure
hPa : -
Rated speed rpm : 500
Del. quantity
cm³/1000 strokes : 80.0
Tolerance
cm³/1000 strokes : ± 2.0
Check tolerance
cm³/1000S. : ± 4.0

BREAKAWAY

Rack travel in mm : 13.60
Rated speed rpm : 1255
Tolerance 1/min : ± 15

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 11.50
Tolerance mm : ± 0.50
Del. quantity
cm³/1000 strokes : 180.0
Tolerance
cm³/1000 strokes : ± 20.0

Check tolerance
cm³/1000S. : ± 25.0

End of test specification sheet